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Buddhism under the Communists

By HOLMES WELCH

THIS article offers a preliminary estimate of what has happened to Buddhists and Buddhist organisations in mainland China during the eleven years since the Chinese People's Republic was founded. Much of the data belongs to the year 1958 when the most rapid changes occurred. Early in 1959, the China mainland press, from which nearly all the data comes, began to give less news on Buddhism. In November 1959 the most important single source, *Modern Buddhism*, was withdrawn from general circulation abroad. Several sentences in the October number,[1] suggest that Peking had become increasingly sensitive to stories of a persecution of Buddhism, and had resolved that the mainland press, at least, would not supply any more evidence of it. The picture is fairly complete, however, with the evidence already in hand.

Changes in the Operation of the Monasteries

There has never been any ecclesiastical organisation in China that embraced all Buddhist monks or even all the monks of a given sect. Each monastery has traditionally been autonomous, all authority resting in the hands of the abbot. So far as we know, there has been no formal change in this system. But we shall see that Peking through its local government apparatus and through the Chinese Buddhist Association (which will be discussed below), has exercised increasingly tight control over everything that takes place inside the monasteries and among lay devotees. Using this control, it has transformed the life of the monks.

Until 1950 monasteries derived most of their income from land holdings, which, in many cases, had been presented to them at the time of their foundation by the Emperor or added later by wealthy patrons.

1 "Our enemies abroad are still slandering that our Party and government are persecuting the Buddhist religion. . . . What they do is merely to close their eyes and slander our great religious policy. We are not afraid of the slanders of enemies." (*Modern Buddhism*, hereafter abbreviated as M. B., October 1959, p. 22.) Compare the often defensive tone of Shirob Jaltso's article in the same issue, and Shirob's remark to the National People's Congress (NPC) in April 1960, where he exposed "the shameless slander of the liars of the western capitalist countries who clamoured that there was no freedom of religion in China" (New China News Agency hereafter abbreviated as NCNA, Peking, April 5, 1960). Curiously enough this remark does not seem to have been included in the text published by the *Jen-min Jih-pao* (*People's Daily*). Compare *Survey of the China Mainland Press*, hereafter abbreviated as SCMP, 2235/7 and *Current Background*, hereafter abbreviated as CB, 627/26, both published by the U.S. Consulate-General, Hong Kong.

For many centuries monks in China have ignored the begging rule which, in Hinayana countries, requires them to go from house to house each day with their begging bowls. Instead, pious Chinese peasants have gone to the monasteries to make altar offerings, usually in the form of produce, or offered such produce to the monks when they came to perform some religious service. The rich, besides land, have donated large sums of money for building, decoration and repairs, and smaller sums for the performance of religious services.

The social changes in China over the past ten years have completely altered this picture. Land reform has stripped the monasteries of most of their land. Chapter 2, section 3, of the Land Reform Act of June 1950, called for the confiscation of agricultural land belonging to Confucian, Taoist and Buddhist temples and monasteries; section 5 provided that monks and nuns should receive the same distribution of land as ordinary farmers. We know that in one case 109 monks received 124 *mou*,[2] and that in another, over ninety monks received 85 *mou*.[3] In each case the figure is for the number of monks in the monastery after land distribution: before land distribution their number had been much greater. One monastery, for example, which had 800 monks before land reform had 200 when it was over.[4] This was partly because many of them returned to lay life when it became clear that they would have to work as hard inside the monastery as outside it; partly because even for those who were prepared to face this prospect, the produce of the land allotted was insufficient; and partly because of an early propaganda drive to get the monks back into the mainstream of production. Those who stayed on in the monasteries formed mutual aid teams in 1954; in 1956 they joined co-operatives; and in 1958 communes. This time-table was not universal; there were wide variations from area to area. Furthermore, not all the monks in a given institution would join the mutual aid or production team at the same time. Some lived off their savings, or looked to their younger brethren for support. Others withheld their land from collective production, preferring to cultivate it on their own. They, however, were subjected to economic pressure, for the government provided tools, seed and other assistance only for the mutual aid or production teams.

Monks in the city were organised to set up light industries on the monastery premises (like dyeing or weaving co-operatives), or they joined such enterprises outside the monastery and then handed over the empty floor-space to local factories and welfare organisations. In both

[2] M. B., October 1958, p. 33.
[3] M. B., November 1958, p. 31. Here the number of monks is given as sixty, but earlier it was over ninety (see *Nan-yang Jih-pao*, June 11, 1958).
[4] M. B., October 1958, p. 27.

city and country, when nearly all the monks of a monastery had left it and yet the government considered it worth preserving as a cultural monument, two or three monks would be kept on to maintain and operate the premises as a state-owned enterprise, earning the wages of skilled workers. They were not allowed to accept donations from visitors.

State subsidies are said to have been given to elderly and disabled monks and to those who were "unable to make both ends meet" with their production resources. It is stated that all such monks in Peking have received a subsidy and it is likely that the same applies to "patriotic" monks in other places.[5] Most of the elderly and disabled, however, seem to be supported by the able-bodied, whom they sometimes outnumber, thus creating a heavy burden. Hence, particularly since the beginning of 1958, more and more of them have had to participate in hard manual labour, "a sight that moved some of the farmers to tears."[6]

The big step-up in pressure to participate in production came in 1958. That year monks all over China took pledges to achieve self-sufficiency "within one or two years."[7] This meant that those who had not yet joined the monastery co-operative must join it; those who were already members must work harder; and that everyone must participate in various campaigns like iron-smelting, afforestation, scrap collection, water conservancy, fertiliser production, and so on. It was also announced that "the time spent on religion must be shortened and religious life must be conditioned by productive labour."[8] In some cases, prayers were read and the *dharma* expounded during work-breaks in the fields. Often minimum requirements were set for working-time, like seven to nine hours a day, or 260 days a year. The stepped-up pressure to engage in production gave new meaning to the old Zen phrase (now often quoted by the Communists): "The day that you do not work, you do not eat." Formerly this meant menial work around the monastery—drawing water, chopping wood, cleaning and sweeping. It did not mean labour in the fields. Thus at the Nan-yüeh monastery only one out of the 103 monks "understood agricultural techniques" when they organised their co-operative.[9]

[5] *China News Service*, Peking, September 2, 1955 (see SCMP 1128/10), etc.; but compare M. B. September 1958, p. 27, where the Buddhists and Taoists of Peking pledge themselves to assist sick and aged Buddhists and Taoists who are unable to work.

[6] M. B., December 1958, p. 28. When the co-operative at Mt. Nan-yüeh was set up in February 1957 only twenty-two of the eighty-three monks were capable of full-time labour (M. B., November 1958, p. 28).

[7] *e.g.*, M. B., June 1958, p. 24; M. B., July 1958, pp. 18, 19.

[8] *Kweichow Jih-pao*, July 10, 1958, p. 1. *Cf.* pledge of Peking Buddhists and Taoists that "personal religious life should not affect production" M. B. September 1958, p. 27.

[9] M. B., June 1958, p. 26. There are several inconsistencies between the account given here and that in M. B., November 1958, p. 28.

Offerings for the performance of religious services have been prohibited since at least as early as 1958 on the grounds that they amount to cheating the people with superstitious practices. Large donations from rich patrons have also ceased, since there are no more rich patrons. Monasteries are not allowed to loan money as they used to do. A few of the country monasteries continue to derive income from serving as hostels and from small-scale enterprises like the manufacture of drugs, but, on the whole, their economic situation has greatly deteriorated.

The year 1958 also saw a step-up in pressure on monks to attend political "study" classes. Some have been weekly, some two or three times a week, some daily. At these classes, as well as in "homework" periods, the monks study the works of Mao Tse-tung and other Chinese Communist leaders, the Marxist classics and the daily newspapers; they are lectured on the national campaign of the moment; they carry out "self-remoulding"; they "rid themselves of dirty things harboured against Socialism" through self-criticism and struggle; and they launch campaigns to "surrender their hearts to the Party."[10] The latter can lead to an impressive ceremony by which success in "self-remoulding" is given formal recognition.

With manual labour by day and study by night, the distinction between monks and laity in China has become largely historical: the communal dormitory in which the monks live and the mess hall in which they eat were once their monastery.

Schools and Publications

The many Buddhist schools, clinics and other welfare enterprises that used to be attached to monasteries or organised by Buddhist laymen have, it appears, now been completely dissolved or absorbed by the government apparatus. This has resulted in part from the government's insistence on a monopoly of education and in part because the monasteries, stripped of their old sources of revenue, have not had the means to continue their traditional benevolent activities.

The only Buddhist school in China today is the Chinese Buddhist Institute, founded on September 28, 1956, by the Chinese Buddhist Association, which we shall discuss in a moment. Housed in the Fa Yuan Monastery in Peking, it offers a two-year course for monastery administrative workers and a four-year course for scholars and *dharma* masters (with studies in Tibetan and Pali, as well as in Chinese). The first class graduated in 1958. The enrolment, which has run between 110 and 120, includes monks, nuns and laymen. School fees and all living expenses are paid by the Buddhist Association. Students have,

[10] Peking *Kuang-ming Jih-pao*, August 8, 1958 (SCMP, 1837/39); M. B., June 1958, p. 27; *ibid.*, September 1958, p. 27; December 1958, p. 33.

like those in other schools, engaged in manual labour. Half of them belong to a "transportation brigade" that does railway loading work. Political studies presumably play a large role in the curriculum.

The picture is similar for Buddhist periodicals. Whereas formerly there was a great variety, published in various parts of China, now there seem to be only two, both monthlies: *Modern Buddhism*, issued in Peking, and *Hung Hua*, issued in Shanghai. *Modern Buddhism* began publication in 1950 and was taken over by the Chinese Buddhist Association in 1953. In 1957 it was being printed in 5,000 copies. It is circulated among monasteries and lay devotees. About two-thirds of the articles are doctrinal, without political content. The other third is either purely political (*e.g.*, reprints of *People's Daily* editorials) or reports on the progress that Buddhists are making in carrying out the economic and political tasks assigned to them by the government (particularly participation in manual labour and production). Since *Modern Buddhism* reports various joint activities of Buddhists and Taoists, it also serves to some extent as a vehicle for the latter, who have no national organ.

The Chinese Buddhist Association

The Chinese Buddhist Association was established at a meeting of 121 delegates held in Peking from May 29 to June 3, 1953. Its objectives, according to a resolution passed at the meeting, were:

1. "To unite the Buddhists of China so that they might participate under the leadership of the People's Government in the movement to love the fatherland and defend peace;
2. "To help the People's Government thoroughly carry out the policy of freedom of religious belief;
3. "To link up with Buddhists in various places in order to develop the excellent traditions of Buddhism."[11]

Though these were the three objectives formally adopted, the conferees also resolved "to continue distinguishing friend from foe in thought and action, to eliminate the spies and special agents sent by the imperialists and Chiang Kai-shek's bandit clique, and to eliminate the reactionary secret society elements that try to take cover under the cloak of Buddhism."[12] The meeting elected a chairman, four honorary chairmen, seven vice-chairmen, a secretary-general, three deputy secretaries-general, eighteen members of a standing committee, and ninety-three directors. Three of the four honorary chairmen were non-Chinese: the Dalai and Panchen Lamas and the Grand Lama of Inner Mongolia, Living Buddha Chagangogun. The fourth was the 113-year-old abbot

[11] NCNA, Peking, June 8, 1953 (see SCMP 585/11–16).
[12] *Ibid.*

Hsu Yun.[13] The chairman was a monk from Chekiang, Yuan Ying, who died four months later and was succeeded by Shirob Jaltso, an elderly lama and vice-governor of Tsinghai. All these seem to have been front men; we may assume (though the by-laws of the Buddhist Association have never been published) that all executive authority lay in the hands of the secretary-general, Chao P'u-ch'u.[14] Nearly half of the sixty-eight monk directors were Tibetan or Mongolian. It seems clear that throughout the proceedings of the founding conference Tibetans were given a prominent role.

The by-laws contained a prohibition against establishing provincial branches, which may have been due to the government's fear that they could become centres of opposition if they were established before the necessary organising work had been carried out. It should be noted that this prohibition did not extend to autonomous areas, since the Tibet branch of the Chinese Buddhist Association was formally inaugurated in Lhasa on October 6, 1956. Possibly in the case of minorities the Party's fear of opposition may have been outweighed by the desire to win over local religious leaders through giving them an important role in some national association. This would have been particularly true in Tibet, where the Communist Party's policy from 1951 to 1959 was to utilise rather than to liquidate the "upper strata." By the spring of 1957 branches had been established for two autonomous *chou* in Yünnan and a branch was in the planning stage for Inner Mongolia.

The Buddhist Association was relatively inactive during the first three years of its existence. It set up its headquarters at the Kuang Chi Monastery in Peking and, as mentioned above, took over the office of *Modern Buddhism*. Meetings were held on December 18, 1954 (of the standing committee); August 16–31, 1955 (plenary board of directors); and March 26–31, 1957 (second national conference). At this last meeting the by-laws were amended to provide for establishing, where necessary, local branches of the association in provinces and major

[13] Probably regarded by a majority of Chinese as the most distinguished monk in China. Though he refused to give the Communists the co-operation they wanted, he was still an honorary chairman of the Buddhist Association when he died in October 1959. Chagangogun died in May 1957, but had not been replaced as of May 1959. The Dalai Lama, though he fled to India in March 1959, continues to hold the position given him by Peking.

[14] Before 1949, he was a businessman who worked with the International Red Cross. In 1950 the new government appointed him Deputy Director of the Civil Affairs Department of the East China Military and Administrative Committee and, a year later, made him Deputy Director of the M.A.C.'s Personnel Department. Since he became Secretary-General of the Buddhist Association in 1953, he has been extremely active in the whole range of united front activities. He is a deputy from Anhwei to the second National People's Congress; a member of the Chinese People's Political Consultative Conference (CPPCC) National Committee; and his position is sufficiently high so that he attended the seventeenth meeting of the Supreme State Conference on August 24, 1959. I have seen no record of his membership in the Chinese Communist Party, but he has proved himself a trusted Party supporter.

cities, though not at the *hsien* level or below. It was explained that just as in 1953 provincial branches had not been advisable, now *hsien* branches were not advisable.[15]

A whole series of branches was then established (Kansu, Shansi, Liaoning, Kweiyang, Nanchang, Canton, Wu-t'ai Shan, etc.). Most of them had an organisation parallel to that of the parent body. Their inauguration was usually preceded by " elevation of political awareness, exposure of rightists hiding under the cloak of Buddhism, and purification and consolidation of Buddhist circles." [16] Late in 1957 the Buddhist Association organised a campaign of " socialist education " which was part of the nation-wide " rectification " campaign. Five regional forums were held in the spring of 1958, which were followed by forums at the provincial, municipal, and even at the *hsien* level. At each level rightist monks were attacked and " forced to admit their guilt," while some form of " patriotic compact " was adopted, promising to accept the leadership of the Communist Party and to take the Socialist road.[17] In 1959 Buddhist study groups took as their central theme the Communist Party's version of the Tibetan rebellion.[18] This would probably not have been necessary unless there had been sympathy for the rebels among Chinese Buddhists.

The Remoulding of Buddhism

The Chinese Buddhist Association has been used primarily as an instrument for remoulding Buddhism to suit the needs of the government, *i.e.*, for completing the " socialisation " of monasteries; limiting religious activities; revising Buddhist doctrine; purging anti-party elements; and mobilising Buddhists to participate in national campaigns. We have discussed the " socialisation " of monasteries. Now we shall briefly touch on the rest.

In limitation of religious activities, the particular targets have been practices that (1) are " superstitious," (2) " cheat the masses," (3) interfere with production and waste produce, or (4) " protect bad people."

The Buddhist Association has condemned the " superstitious belief in spirits and the heterodox belief in or practice of divination and healing." [19] It has also condemned such old Chinese Buddhist customs as burning paper-money, celebration of " superstitious festivals," and

[15] NCNA, Peking, March 26 and 31 (SCMP 1500/11 and 1503/10). M. B., May 1957, pp. 30–31, as quoted by *China News Analysis* 221/5.

[16] M. B., November 1958, p. 23; *cf.* September 1958, p. 9, etc.

[17] M. B., October 1958, p. 21; September 1958, p. 27; *Kirin Jih-pao*, June 20, 1958 (see SCMP 1834/10) etc.

[18] M. B., October 1959, p. 10.

[19] M. B., February 1958, p. 32. *Cf. Tsinghai Jih-pao*, October 17, 1958 (see CB 549/5); October 23, 1958 (see SCMP 1932/19).

sacrifice to the hungry ghosts.[20] To accept donations in connection with these and other ceremonies is considered "cheating the masses."[21]

Chinese festivals, with their great outlays of food and decoration, constitute waste of produce, while prolonged prayer constitutes interference with production.[22]

Two forms of "protecting bad people" have been specified. The first is "indiscriminate recruitment of disciples" by a monk or a monastery. The second is offering hospitality to travelling monks. Monasteries are not permitted to receive as members "landlords, counter-revolutionaries, persons under surveillance, members of heterodox Taoist sects or societies, and all those who are anti-Socialist."[23] The abbot of one famous institution was arrested for, among other reasons, using the monastery as a place to shelter such people.[24] Presumably the only way in which a monk can be sure that he is not recruiting an "anti-Socialist" is to ask the Party. Those novices who are most likely to have Party approval would seem least likely to make good monks.

A pledge not to offer hospitality to travelling monks has been included in many of the "patriotic compacts."[25] Such monks are evidently objectionable to the government both because they are parasites, not engaged in production, and because they accept alms from devout believers. They are also independent individuals who, like fortune tellers, disturb the atmosphere of regimentation. One reference to their "suspicious behaviour" suggests that the government may believe they have engaged in espionage and such counter-revolutionary activities as, for example, telling persons in one area about conditions in another.[26]

As to actual suppression of "bad people" within Buddhist circles, reliable information is hard to come by. Stories have long been current about wholesale arrests and executions of abbots during land reform, the presentation of anti-Buddhist exhibits and films, and various kinds of atrocities. The Buddhist Association's proclaimed task of eliminating spies and special agents indicates that there has been some truth in all this, but the evidence to be found in the Chinese Press is rather limited. "Struggle meetings" in which Buddhist priests are violently confronted at mass rallies by individuals who claim to have been

[20] M. B., September 1958, p. 28.
[21] *Ibid.*; M. B., December 1958, p. 33; *Kirin Jih-pao*, June 20, 1958 (see SCMP 1834/11); *Kweichow Jih-pao*, July 10, 1958, p. 1. In October 1959 Shirob Jaltso protested that there was freedom for people to give and for monks to accept "legitimate alms and offerings," but almost in the same breath he condemned "using Buddha as a pretence for making money." M. B., October 1959, pp. 12–13).
[22] M. B., September 1958, p. 28; July 1959, p. 34; December 1958, p. 33; *Kweichow Jih-pao*, July 10, 1958, p. 1.
[23] M. B., December 1958, p. 33.
[24] *Nan-fang Jih-pao*, June 11, 1958 (see CB 510/22).
[25] *e.g.*, M. B., June 1958, p. 23.
[26] M. B., September 1958, p. 28; *Kweichow Jih-pao*, July 10, 1958, p. 1.

wronged by them have only been reported from Tibetan areas. Numerous "rightist" laymen and monks were "exposed" in 1957–58, but there was usually no indication of what punishment they received. In three instances, however, there were actual arrests. Pen Huan, Abbot of the famous Nan Hua Monastery in northern Kwangtung Province, was arrested in June 1958, along with one other monk, and neither of them has been heard of since.[27] In August 1958 the abbot of a monastery in Tsamkong was arrested as former head of the Kwei Ken Tao and sentenced to five years in prison.[28] A Kiangsi abbot was arrested in the same month, also as head of a reactionary Taoist sect.[29] The Communist Party claims to be trying to purify Buddhism of infiltrators from such sects. It is an interesting fact that, at the same time, the Buddhist Association has been promoting joint activities by Buddhists and Taoists (*e.g.*, joint co-operatives and joint study) and even with other religions.[30]

The revision of Buddhist doctrine that has been promoted by the Buddhist Association does not fall within the scope of this article. It has, however, been fundamental. Buddhists have not only been urged to "oppose superstitious belief in spirits," but also to put love of country above love of religion.[31] They have learned that it accords with Buddhist teaching to kill counter-revolutionaries and imperialists; "we want to kill all the war-provoking devils in defence of world peace—this is the Buddhist and Taoist doctrine of genuine mercy."[32] Mao Tse-tung is a Living Buddha,[33] Socialist society is the "Western Paradise on earth"[34]; and "only under the Communist Party can the best traditions of Buddhism . . . be realised."[35] Most fundamental of all is the Party's insistence that the Buddhist must seek salvation in material progress.

Preservation of Buddhist Culture

Not all the policies of the Peking government would provoke the criticism of conservative Buddhists, particularly in the field of art and

27 *Nan-fang Jih-pao*, June 11, 1958 (see also CB 510/21 *et seq.*).
28 M. B., November 1958, p. 34.
29 *Ibid.*
30 *Kuang-ming Jih-pao*, August 8, 1958 (see SCMP 1837/39); M. B., October 1958, p. 34; December 1958, pp. 30–32; etc.
31 NCNA February 4, 1958 (see SCMP 1759/20) *cf.* NCNA Peking, March 11, 1958 (see SCMP 1733/1).
32 M. B., August 1958, p. 28. *Cf.* poem by *dharma* master Hsin-tao in M. B., December 1958, p. 31.
33 NCNA Peking, October 14, 1959 (see SCMP 2120/9). In a not dissimilar vein, NCNA Lhasa, August 24, 1960, reported that at a harvest festival, one "former woman serf . . . went over to a field, plucked a sheaf of barley ears, and laid it before the portrait of Chairman Mao Tse-tung."
34 M. B., October 1958, p. 21.
35 M. B., September 1958, p. 27. *Cf.* the statement alleged to have been made in the last will and testament of Yuan Ying, Chairman of the Chinese Buddhist Association, that "participation in patriotic movements and efforts for world peace . . . are the sole foundation on which Buddhists may expect to become Buddhas," (M. B., September 1956, p. 27).

literature. Indeed one might say that the restoration of Buddhist cultural monuments in China since 1950 has been as impressive as the transformation of the practices and beliefs that originally created them. Although this work has been largely carried out by the state and at the state's expense, the Chinese Buddhist Association has presumably played an advisory role.

The most important work has been done on Buddhist buildings and caves. The restoration of at least twenty sets of buildings and five caves, all of outstanding historical or artistic importance, has been reported since it was called for in a Party directive of June 1950. The more famous Buddhist sites are probably in better condition now than they have been for many centuries.

Not many Chinese Buddhist monasteries have as immediate a significance for foreign Buddhists as, for example, the Hsuan Chung Monastery in Shansi, which is sacred to the Shinshu Buddhists of Japan: this monastery was rebuilt and enlarged in 1954–56 specifically because of its international significance.[36] However, all newly restored Buddhist monuments can be and have been successfully used to impress upon visiting Buddhists the flourishing state of Buddhism in China.[37] It is probably a measure of the Party's belief in the importance of such visitors that it has been ready to divert large sums from capital construction for repairing Buddhist monuments. Repairs at the Ling Yin Monastery in Hangchow, for instance, took six years and cost 500 thousand *yuan*. In May 1959, 200 artisans started renovating the Kumbum Monastery near Sining (although the roofs had already been regilded some five years earlier) and were not expected to be finished until 1960. The government has not merely restored old buildings, but has constructed what it claims to be the first major new Buddhist monument of this century: the thirteen-storeyed pagoda near Peking, the original of which was destroyed at the end of the Ch'ing dynasty and which is now to house the Buddha tooth relic. The government has even prosecuted farmers for " destroying national cultural treasures " when they used bricks from old temples for construction purposes.[38] (It does not, however, appear to have prosecuted those cadres " whose cultural level was not very

[36] M. B., September 1956, pp. 12–15.

[37] What such visitors do not realise is that most of the Buddhist buildings in China have since 1950 simply been confiscated by the government and turned into schools, nurseries, barns, factories and warehouses. Images have been melted down as scrap-metal or collected for sale as curios. Even in the case of buildings that are intact, most appear to have been preserved purely as cultural monuments. Only a very few have continued to function as monasteries and in them are collected the remaining monks from institutions that have been closed down.

[38] *Kuang-ming Jih-pao*, September 23, 1956, p. 1.

high" and who demolished some famous pagodas in Chekiang to get bricks for road building.) [39]

Buddhist scholarship has also been promoted. Work on a Chinese Buddhist encyclopedia was begun in 1956 (although its publication, scheduled for 1958, has not yet been announced) and at the same time work commenced on a section about Buddhism in China for the *International Buddhist Encyclopedia* under compilation in Ceylon. Vast numbers of Buddhist sutras, manuscripts, paintings, tablets, and printing blocks have been collected and many reproductions as well as photographs of newly restored cultural monuments have been published. The Ching Ling Text Society has been revived in Nanking.

Promotion of Contact with Buddhists Abroad

Since contact between Chinese and foreign Buddhists was first renewed in 1952, the Chinese People's Government has systematically used Buddhism to convince foreign Buddhists that China is a friendly country that has a similar culture and loves peace; and to convince them that if their own countries should have Communist governments, Buddhism would flourish as never before. Contacts have taken many forms. The commonest has been Buddhist delegations, either for purely sightseeing purposes, or to accompany the gift or loan of a sacred relic, or in connection with an international conference. Another form of contact has been work on some common cause (like the return to China of the remains of Chinese who died in Japan during the war).

There have been exchanges of Buddhist visitors with the following countries, listed in the order of the number of delegations to and fro: Burma, Ceylon, Cambodia, India, Japan, Nepal, Thailand and North Vietnam. Many visitors have left China praising the Peking government for its support of Buddhism and its policy of "freedom of religious belief." A particularly striking case was that of Amritananda, Nepalese Vice-President of the World Fellowship of Buddhists, who visited China in July and August 1959, only four months after the suppression of the Tibetan rebellion across Nepal's northern border. Amritananda was given an extended tour of Buddhist showplaces in east and northeast China and, according to NCNA, responded with such statements as: "Before coming to China there were doubts in my mind: in the course of my present tour I have learned for myself not only of the rapid growth of industry and agriculture, but that there is genuine freedom of religious belief. . . . To provide a better life for the people conforms to the basic spirit of Buddhism, and this we have seen in China." [40]

[39] *Jen-min Jih-pao*, March 17, 1957, p. 8 (see *China News Analysis*, 221/6).
[40] NCNA Shenyang, August 2, 1959 (see SCMP 2072/35).

Most visitors, like Amritananda, stay longest in Peking, where they are shown around the Kuang Chi Monastery, the Yung Ho Lamasery and the Chinese Buddhist Institute. They see Buddhist services, impeccably performed, and often hold learned discussions of doctrine with the monks. Not a few visitors have had interviews with Mao and Chou, another indication of the importance that the régime attaches to such visits. Both in Peking and in the provinces, of course, visitors see only the showplaces, and even there the usual barriers exist to investigating the life and attitudes of the remaining monks.

Representing China at international religious conferences has been an important function of the Buddhist Association. It has sent delegates to attend the World Buddhist Fellowship Conferences. Leading monks have repeatedly made public statements, disseminated abroad by the NCNA, which have called for the liberation of Formosa, for U.S. troops to get out of Lebanon, for the establishment of normal relations with Japan, and for the defeat of imperialism in Africa, Asia and Latin America. Telegrams have been sent to parallel foreign organisations on every possible occasion. Buddhist meetings are held on international themes like the celebration of the October Revolution. All this is evidently designed to create the impression, both at home and abroad, that Buddhists are staunch supporters of government policy. It also plays a certain ancillary role in international diplomacy. Just as in 1958 the visit of a Cambodian Buddhist delegation to China preceded the establishment of diplomatic relations between the two countries, so in 1960 the visit to Burma of a Chinese cultural delegation, whose deputy head was Chao P'u-ch'u (see note 14) preceded the Sino-Burmese boundary settlement.

Conclusions

As we have seen, the Chinese Buddhist Association, like other units of the united front, plays a role (1) as a channel for transmitting party policy to Buddhist monks and laymen, (2) as a supervisory agent for seeing to it that Party policy is carried out, and (3) as an agency for entertaining foreign visitors who have an interest in Buddhism and for convincing them that it is flourishing in China as never before. Other Buddhist organisations play no special role for, including the monasteries, they have been integrated into the political and economic life of the rest of the country.

So far as I am aware, not a single avowed Buddhist holds a position of authority in the Party or government.

The days are past when the monastery was an attractive refuge from the troubles of the world. Neither inside it nor outside it is there now the leisure for meditation and prayer. The simple pietism of the common

people is discouraged, along with the material support they took comfort in providing for the monks. Even rebirth in the Western Paradise has been officially discredited on the basis that the Chinese Communist Party is building the Western Paradise here on earth. Since the government has now forbidden the "indiscriminate" recruitment of novices, the size of the Sangha in China will probably continue to shrink.[41] Since novices must be politically acceptable to the Party, its quality will probably continue to fall. It also appears that Buddhists will be increasingly encouraged to join with Taoists and others both in work and study, so that in the end the followers of all religions will belong to a single group that can be conveniently processed by the state. This will give greater play to the syncretistic tendencies that have long been present in Chinese Buddhism. Not only will the Sangha decline in size and quality, but purity of doctrine will be affected on one side by the old Chinese ideal of a single, all-embracing religion and on the other side by the Buddhist Association's efforts to sift and revise the teachings of Buddha.

We should note that despite these efforts by the Buddhist Association, the basic policy of the régime is not to revise Buddhism and transform it into Marxism-Leninism, but to let it die. There have, in fact, been warnings against trying to preserve religion over the long run by finding in it elements that are compatible with the official ideology, although the tactics now employed call for utilising such elements temporarily in united-front propaganda work.[42] A recent article in *Modern Buddhism*, for example, asserted that Buddhism represented a democratic, atheistic and dialectical revolt by the Kshatriya caste against Brahmin domination.

What are the chances that Buddhism will survive the Chinese Communist programme for its demise? They seem exceedingly small. Chinese Buddhism is at the end of a decline that began with the rise of neo-Confucianism in the Sung Dynasty. Now, more than ever before, it faces a hostile government without and ebbing vitality within. Perhaps martyrdom is less inspiring when people feel it is for a lost cause. In any case, there is no indication that the hard-driven people of China have been turning back towards Buddhism or are any more indignant over the persecution of monks than they have been over the removal of graves and the use of ancestor tablets for building latrines.

[41] According to the mainland Press the number of monks in China is 500,000, with 100,000,000 Buddhist believers (*Che-hsueh Yen-chiu* (*Philosophical Research*), February 15, 1958—see CB 510/11; M. B., October 1959, p. 10). These figures are, in my opinion, far too high, even considering the 110,000 monks and nuns in Tibet (as of March 1960: see CB 626/15). In China proper, excluding minority areas, I doubt that there are more than 5,000 monks and nuns who continue, so far as they are allowed, to lead a monastic life.

[42] See "Atheists and Theists Can Co-operate Politically and Travel the Road to Socialism" by Chang Chih-i in *Che-hsueh Yen-chiu*, February 1958 (CB 510/18).

My own belief is that, twenty years from now, Buddhist scholarship will be active and Buddhist cultural monuments will continue to be preserved. A very small number of monks will still be performing services at the best-known monasteries, principally in Peking. Intercourse with Buddhists abroad, though it will have become more difficult, will not have ceased. But Buddhist attitudes and devotion, among the remaining monks as well as among laymen, will have been virtually eliminated. Buddhism, just a little less than two thousand years after it arrived in China, will be dead.

Sino-Soviet Competition in North Korea

By JOHN BRADBURY

> "Particularly the Soviet Union and the Chinese People's Republic are not only our great brother countries but also our closest neighbours. The firm unity with the peoples of the two countries is an important guarantee for all victories of our people."—KIM IL-SUNG.[1]

VICTIMISED by its strategic location throughout history, North Korea appears once again to be the scene of competition for dominant influence between its powerful neighbours. As the recent statement by Chairman Kim Il-sung quoted above suggests, the Communist régime in North Korea was apprehensive about the mounting crisis in Sino-Soviet relations in the summer and autumn of 1960. What it did not reveal is that the issues involved in the Sino-Soviet dispute had already exercised a profound effect on the domestic and foreign policies of this Asian satellite for a period of several years.[2]

Broadly speaking, the Sino-Soviet rift has emerged as the result of two fundamental attacks launched by Communist China against the traditional position of Moscow as the undisputed leader and arbiter of doctrine within the Communist *bloc*.[3] The first challenge, the appearance of Communist China's commune and "leap forward" programmes in the fall of 1958, provided a distinctive Chinese road to Socialism and Communism which diverged sharply from Soviet precedent and experience. The second challenge took the form of a vigorous attack against Khrushchev's "peaceful co-existence" strategy for leading the *bloc* and international Communism to a final global victory. Both challenges were accompanied by the implicit claim that Mao Tse-tung, as the foremost living Marxist-Leninist theoretician,[4] was uniquely qualified to provide ideological and policy guidance to the world Communist movement.

1 Korean Central News Agency (KCNA), August 14, 1960.

2 Although this article focuses on developments since 1958, it is reasonable to assume that Sino-Soviet friction over North Korea dates back at least as far as the Korean War. Limitations of space as well as lack of data, preclude treatment of this earlier period.

3 For a comprehensive discussion of the origins of the Sino-Soviet dispute, see Donald S. Zagoria, "Strains in the Sino-Soviet Alliance, *Problems of Communism*, May–June 1960.

4 The claim of ideological pre-eminence for Mao first appeared in *Jen-min Jih-pao* (*People's Daily*), September 13, 1958. For a recent instance, see Fu Chung, "Great Victory for Mao Tse-tung's Military Dialectics," *ibid.*, October 6–7, 1960.

They were also accompanied by the only slightly less grandiose pretension that Communist China was uniquely qualified to lead " the countries of the East " and, by extension, all the underdeveloped areas of the world to Socialism and Communism. As a backward Asian country and, what is more, a vital buffer area along China's north-eastern frontier, North Korea has constituted a prime target in Peking's drive to win acceptance of its more radical approach to the domestic construction of Communism and its more militant approach to international Communist strategy.

Domestic Construction of Communism

The appearance of Communist China's commune and " leap forward " programmes in the summer of 1958 introduced a new element of discord into Sino-Soviet-North Korean relations which persists to the present day. Conceived as the instrument for achieving rapid economic and social development leading to the early advent of the Communist society, the commune epitomised a distinctive Chinese road to Socialism and Communism with special applicability to the underdeveloped nations of Asia.

The main outlines of the Chinese ideological challenge were present in a July *Red Flag* article entitled " Under the Banner of Chairman Mao." [5] It was here that Mao Tse-tung was credited with discovering in the commune and " leap forward " programmes a special road enabling China to accelerate Socialist construction and to realise Communism " in the not distant future." Moreover, he had done this in accordance with Lenin's injunction to " the Communists of Eastern countries " to " creatively develop " Marxist theory " in the light of special conditions unknown to the European countries . . . realising that the peasants are the principal masses." [6] The implication was strong that Mao had solved the special problems of Socialist and Communist construction which confronted all Asian countries.

Communist China's " special conditions," which have been summed up by Chairman Mao in the phrase " poor and blank," are usually identified as an impoverished agrarian economy, a shortage of arable land relative to population, and cultural backwardness resulting from past imperialist oppression. In the Chinese view, a programme calling for total mobilisation of all available resources was necessary in order to break through these barriers of industrialisation and modernisation. As the radical social organisation designed to implement this programme, the commune was expected to perform the following economic functions:

[5] *Hung Ch'i* (*Red Flag*), Peking, July 16, 1958.

[6] Lenin's remarks were addressed to Communist organisations of Eastern Russia, not of Asia. The *Hung Ch'i* article admitted this, but held that the tasks presented by Lenin were " likewise placed before the Communists of Eastern countries."

centralisation of control over all means of production in the countryside as a first step toward "all-people ownership" (*i.e.*, state ownership); mobilisation of the peasants to implement a "mass line" of industrial development featuring the "native" production of iron and steel; extension of more effective controls over peasant consumption through the commune mess-hall and the "free supply" system of distribution (hailed as the beginning of the Communist system of distribution "according to need"); and intensive exploitation of human labour to a degree unknown in modern history. In addition, the commune was expected to perform various ideological functions which were to play an equally indispensable role in China's leap to modernisation. The very term "commune" connoted—intentionally so—an advanced status on the road to Communism. Pleading special conditions, the Chinese Communists undertook to substitute moral and psychological incentives —the early attainment of Communism—for material incentives as the major stimulus for production. The claim of priority in the march to Communism was stated explicitly: "Tomorrow we shall build a paradise of happiness never before attempted in history—Communism."[7]

Communist China's pretension to have discovered a special road for Asian countries leading to the early achievement of Socialism and Communism evoked an enthusiastic response in North Korea. Deviating from its traditional role as a docile Soviet satellite, the Pyongyang régime embraced a whole series of Chinese Communist policies and programmes in the summer and autumn of 1958, even to the point of flirting with the heretical commune organisation.[8]

Imitation of the Chinese example began in June at a Korean Workers Party plenum. At that time it was decided to launch a mass movement for construction of small industrial installations combining "native and modern" technology—a movement which followed closely, both in time and content, Communist China's "mass line" of local industrialisation. Even the propaganda slogans were the same, including exhortations to rely on the "activism and creativeness" of the masses in a campaign of "all the people operating industry."[9] The next and far more significant step was taken at a September central committee plenum which inaugurated North Korea's "flying horse" programme of economic development and the simultaneous amalgamation of some 13,000 collective farms into 3,800 political-economic units of township size. In

[7] For a good discussion of the economic and ideological significance of China's communes, see the articles by S. Rich, D. Rousset and Richard Lowenthal in *Problems of Communism*, January–February 1959.

[8] This significant development attracted relatively little attention in the West. For a rare article dealing with this period, see P. Rudolph, "North Korea and the Path to Socialism," *Pacific Affairs*, June 1959.

[9] *Jen-min Jih-pao*, October 11, 1958.

a major policy speech of November 20, Kim Il-sung revealed the extent to which these programmes had been inspired by the Chinese Communist model.[10]

First, Kim referred to his people as " poor and uncultured " (calling to mind Mao Tse-tung's characterisation of China as " poor and blank ") and, as such, compelled to engage in a " bitter struggle " for a " leap forward " in economic development which would permit " catching up " with the more advanced Socialist countries of Europe. As a capsule statement of the rationale of Communist China's " great leap forward " programme, this could hardly be improved upon. Next, Kim advanced claims for North Korea's " flying horse " programme of economic development which bore a striking resemblance to the " leap forward " pretensions in Communist China. Pyongyang had already " solved " the food problem and " within two to three years "—the same time-period featured in Chinese propaganda—food was to become " extremely abundant." An accelerated programme of agricultural development based on mobilising the peasants and a similarly spectacular development of industry would lead to completion of the stage of Socialist construction and initiation of the " transition to Communism " within four to five years.

Even more suggestive of Chinese influence was the clear implication that North Korea was incorporating salient features of Communist China's commune programme into its own reorganisation of rural society. Kim placed heavy emphasis on moral, rather than material, incentives as the stimulus for production, holding forth as the reward for " bitter struggle " the realisation of Communism " in the not distant future." He disclosed that North Korea was contemplating establishing " comprehensive, Communist, all-people ownership " (*i.e.*, state ownership) in the countryside, another basic characteristic of China's commune. Even more striking, he revealed that Pyongyang was considering introducing the commune system of distribution featuring the " free supply " of commodities determined " according to need." Kim made this point in the form of a conversation with a peasant woman during a visit to an agricultural co-operative.

> When I asked her how she would like it if all textile products, rice and everything else were supplied free of charge; if the peasants were placed under the same wage system as the workers; and we proceeded thus in the direction of practising the Communist principle of distribution along with the Socialist principle of distribution at the same time; she replied that that sounded simply wonderful.

The very same co-operative visited by Kim had already established, by the end of October, most of the collective livelihood institutions of

[10] Pyongyang radio broadcast, North Korean Home Service (hereafter referred to as NKHS), December 9, 1958.

China's communes, including public mess-halls, nurseries, kindergartens and sewing teams.[11]

Immediately after this remarkable speech, Kim Il-sung spent three weeks in an extended tour of Communist China. The recipient of signal honours and popular demonstrations throughout his visit, the North Korean leader responded with an enthusiastic endorsement of Communist China's unorthodox programmes which by now were, to a significant extent, those of his own country. Asserting that "the two countries of Korea and China . . . are advancing to Socialism and Communism with flying leaps," he made the following laudatory appraisal of China's communes.

> We are very much interested in the communisation movement. . . . As a result of setting up public mess-halls, nurseries, etc., you have achieved collectivisation not only of production but also of livelihood; this means that . . . you have advanced a step towards Communism. . . . We will certainly pass on to our peasants the great results you have achieved from your commune movement. Also we will strive hereafter . . . to strengthen our mutual co-operation in building Socialism and Communism.[12]

Kim's endorsement of the Chinese model was made even more explicit after returning to North Korea, when he hailed the Chinese programmes as "an example of the creative application of Marxism-Leninism to the realities of their country and *a particularly good example for Socialist revolution and construction in countries which were backward and under colonial oppression in the past*." [13] (Emphasis added.)

It is important to assess the significance of this development—the Chinese initiative and the North Korean response—as viewed from Moscow. Whereas the argument of "special conditions" had been advanced earlier to justify the deviation of "national roads" to Socialism (*e.g.*, Poland), it was now being advanced to justify a separate and distinct road (what is more, a short cut) to both Socialism and Communism for the entire continent of Asia or even, by extension, for all underdeveloped areas of the world. By implicitly denying the validity of the Soviet model for the special problems of economic and social development in Asia, the Chinese were in effect staking a claim for hegemony over Asian Communism, and the North Koreans, by acknowledging a Chinese prototype for the underdeveloped areas, appeared to have recognised this claim.

The Soviet reaction revealed a thorough appreciation of the fundamental nature of Peking's challenge. In rapid succession, the Russian leadership attacked China's premature attempt to introduce distribution

[11] *Jen-min Jih-pao*, November 28, 1958.
[12] *Ibid.*, November 27, 1958.
[13] KCNA, December 10, 1958.

"according to need" as "unworkable" and as "discrediting Communism"; the Chinese undertaking, through the commune, to move rapidly to "all-people ownership" as a violation of "economic laws"; and the Chinese pretension to be in the vanguard in the march to Communism as a vulgar manifestation of "equalitarian Communism." By announcing Russia's own accelerated programme of Communist construction featuring a highly developed "material and technical base" and by stressing that rapid progress of the "economically backward countries" was dependent on Soviet aid, it was made quite clear that the Soviet Union intended to determine the pace and order of *bloc* progress to Communism and that Khrushchev, not Mao Tse-tung, would solve the "problems of Marxist-Leninist theory connected with the transition from socialism to Communism." [14]

Soviet denial of the Chinese claim to have discovered a special road for Asian Communism was sharp and unmistakable. The strategy was first to stress the "general laws" of Marxism-Leninism which have universal application and then to assert the validity of the Soviet model, as the embodiment of these laws, for both Europe and Asia. In a November 6 speech in Peiping commemorating the October Revolution, Soviet Ambassador Yudin emphasised that both "Europe and Asia," in accordance with Lenin's prediction, "must sooner or later" follow the "correct" Soviet road.[15] The Draft Theses of Khrushchev's Report to the 21st Party Congress was even more explicit.

> V. I. Lenin foresaw that the Soviet Union would exert chief influence on the entire course of world development by its economic construction. Lenin said: 'If Russia becomes covered with a dense network of electric stations and powerful technical equipment, our Communist economic construction will become *a model for the future socialist Europe and Asia.*[16] (Emphasis added.)

Although the Soviet counter-offensive was directed primarily at Communist China, many of its strictures applied to North Korea as well. In the face of obvious Soviet displeasure with its defection, the North Korean régime appeared to abandon precipitately its plan to emulate Peking by "advancing to Socialism and Communism with flying leaps." At the Soviet 21st Party Congress in late January 1959, Kim Il-sung pointedly described his country as proceeding "along the road to Socialism," with "the rich experiences accumulated by the Communist Party of the Soviet Union and the Soviet people always serving as a guide in all our work." [17] At the same time, Pyongyang continued to imitate

[14] Most of these pointed, if oblique, criticisms appeared in Khrushchev's report to the 21st CPSU Congress, January 28, 1959.
[15] *Jen-min Jih-pao*, November 7, 1958.
[16] *Pravda*, November 14, 1958.
[17] KCNA, January 30, 1959.

Peking's "great leap forward" by claiming "miraculous successes" in production and by adhering to hopelessly unrealistic long-term goals. As late as mid-August 1959, Vice Premier Kim Il still spoke of doubling grain output and either tripling or quadrupling industrial output by 1964–65.[18]

Responding to a new Chinese initiative in the fall of 1959, the North Korean régime once more spoke out vigorously in defence of Communist China's unorthodox programmes. After a period of relative moderation and retrenchment, Communist China's leadership had launched a spirited counter-attack against Soviet criticism of the commune and had reiterated the claim that China constituted a model for the underdeveloped nations of Asia. In articles celebrating Communist China's tenth anniversary on October 1, 1959, Foreign Minister Ch'en Yi asserted that "all oppressed nations and peoples . . . see in the Chinese people their tomorrow," and party secretary-general Teng Hsiao-p'ing declared China's experience in "rapidly getting rid of poverty and backwardness" to be "*an example of going over from democratic revolution to socialist revolution in a colonial and semi-colonial country and of transforming a backward agricultural country into an advanced industrial country.*"[19] (Emphasis added.)

In marked contrast with the Soviet and most East European delegations attending this anniversary celebration, Kim Il-sung predicted "new and greater achievements in the great leap forward and people's commune movements"; hailed them by implication as "a great contribution to further developing Marxist-Leninist theory and enriching the experience of the international Communist movement"; declared that his countrymen "always learn from your achievements"; and asserted that "no force can break . . . the friendship of the Korean and Chinese peoples based on common ideas and aims."[20] This declaration, in conjunction with the even more candid acknowledgment of the Chinese model by East German delegate Herman Matern (who hailed the commune "as an example . . . for the millions of Asian peasant masses"[21]) posed anew the threat of an emerging Asian *bloc* of Communist nations looking to Peking for inspiration and guidance.

Following his abortive October conference with Mao Tse-tung in Peking, Khrushchev apparently decided to resort to more forceful measures designed to pressure Communist China and its *bloc* supporters back into line. On December 1, for example, he launched a polemical, if oblique, attack on China's commune and "leap forward" programmes

[18] Pyongyang radio broadcast, NKHS, August 14, 1959.
[19] New China News Agency (NCNA), October 2 and 3, 1959.
[20] KCNA, September 28, 1959.
[21] *Jen-min Jih-pao*, October 7, 1959.

in addressing the Hungarian party congress, characterising them as a "distortion of the teaching of Marxism-Leninism on the building of socialism and Communism" resulting from "conceit . . . and mistakes in leadership. . . ."[22] This public criticism was followed almost immediately by a North Korean decision to halt temporarily its own "flying horse" programme, with 1960 designated a "buffer year" in order to correct deficiencies in agriculture and provide a much needed breathing spell in its economic development programme.[23]

Another Soviet counter-measure was the convocation in Moscow in early February 1960 of an unprecedented top-level *bloc* conference on agriculture. North Korea's participation in this conference, which almost certainly levelled criticism at China's communes, was an indication of continued susceptibility to Soviet pressures and, perhaps, of growing disenchantment with Chinese programmes as a solution to its own agricultural problems.[24] The absence of China and North Vietnam, usually regarded as oriented to Peking, and the fact that a speech delivered by Khrushchev on this occasion has never been released suggest that this was the first of a series of multilateral conferences convened by the Russian leader in 1960 for the purpose of "isolating" Communist China within the ranks of the international Communist movement.

Apparently reacting to the pressures applied at this conference and the subsequent Bucharest meeting of world Communist parties in June, North Korea proved to be an early casualty among those who had defended Peking's heretical programmes. In marked contrast to previous laudatory appraisals, North Korean commentary throughout 1960 studiously ignored the existence of China's communes. A striking example of this new subservience to Moscow appeared in Kim Il-sung's message of greetings in observance of China's eleventh anniversary celebration on October 1. Whereas a year earlier he had proclaimed the vitality and creativity of this radical social organisation, the North Korean leader now felt constrained to enter into the Soviet-sponsored conspiracy of silence by ignoring the people's commune in his congratulatory message.[25]

In part responding to this development and in part preparing for the impending summit conference in Moscow, Peking began to exert a number of countervailing pressures in October 1960 in order to maintain its position in North Korea. First was the grant of a loan of some £37

[22] *Pravda*, December 2, 1959.
[23] Pyongyang radio broadcast, NKHS, December 6, 1959.
[24] Attracted by Communist China's claim to have doubled grain production in 1958 by means of a revolutionary high-yield agricultural technology, the North Korean régime had followed Peking's lead by reducing planted grain acreage in 1959. Instead of the anticipated increase of 35 per cent., however, grain output in that year dropped nearly 10 per cent.
[25] NCNA, September 30, 1960.

million ($105 million) to finance deliveries of equipment and technical assistance for industrial development.[26] With this new credit, Communist China's total assistance to Pyongyang since the end of the Korean War now exceeded that of the U.S.S.R. Coming at a time of stringency in China's own economic development programme and of similar sizable loans to Outer Mongolia and North Vietnam, this extension of aid indicated a new effort to compete with the Soviet Union for influence in the Asian members of the *bloc*.

Next was the dispatch of a high-ranking military goodwill mission to North Korea in late October for a joint celebration of the tenth anniversary of China's entry into the Korean war. Politburo member and chief of mission Ho Lung utilised this occasion to attack the "modern revisionists" (an epithet directed at Moscow at this stage of heated polemics in the Sino-Soviet dispute) for their "bitter envy and hatred of our country's construction achievements," their "vain attempt to isolate China" and, more pointedly, their "vain attempt to sabotage . . . the friendship and unity" of China and Korea.[27] Even more suggestive of a continuing struggle for influence in North Korea was a curious passage in the report issued by deputy mission chief Lo Jui-ch'ing on returning to Peiping. By contrasting China's consistent "wise" policy of "showing respect" for the leaders of North Korea with the "non-Marxist-Leninist" practice of "great nation chauvinism," he seemed to imply that other *bloc* nations had been guilty of intervening in Pyongyang's internal affairs.[28]

Caught in this crossfire, North Korea's attitude towards Communist China's distinctive programme of Socialist and Comunist construction on the eve of the Moscow summit conference displayed marked ambiguity. On the one hand, succumbing to Soviet pressures, it had disavowed the commune not only as a model for North Korean emulation but even as a legitimate form for building Socialism and Communism within China itself. On the other hand, there were indications that Pyongyang still subscribed to a number of the premises underlying Communist China's neo-Stalinist hard-line programme of economic and social development.

The North Korean régime continued to endorse China's "great leap forward" and to implement, although at a somewhat reduced tempo, its own "flying horse" programme.[29] There was continued stress on an

[26] *Ibid.*, October 13, 1960.

[27] *Ibid.*, Pyongyang, October 24, 1960.

[28] *Jen-min Jih-pao*, December 12, 1960.

[29] The new seven-year plan unveiled by Kim Il-sung in August 1960 signalled the resumption of North Korea's forced draft development programme conducted at "flying horse" speed. The goals of more than tripling industrial output and increasing grain production (which has remained stationary for three years) by over 50 per cent. still appear highly unrealistic.

integral feature of these related programmes—the construction of small-scale local industrial installations combining "native and modern" technology. There was continued reliance on moral exhortation and revolutionary zeal, rather than material incentives, to stimulate rapid advances in production and construction. In keeping with Kim Il-sung's discovery (after Mao Tse-tung) of "the decisive role played by human consciousness in developing the productive forces," [30] political indoctrination designed "to mobilise the masses" continued to receive priority in all phases of the country's development programme.

Most significant of all was the growing tendency to characterise domestic policies as the product not of Soviet experience but of the "creative application of Marxism-Leninism" to the special conditions of North Korea.[31] By increasingly stressing "the individuality of North Korea's revolution," it appeared that Pyongyang aspired to a position of neutrality in the deepening Sino-Soviet controversy over the "correct" road to Socialism and Communism on the eve of the Moscow Conference in November 1960.

International Communist Strategy

The Sino-Soviet dispute on international Communist strategy has entailed equally disturbing consequences for the Democratic People's Republic of Korea. Although couched in ambiguous doctrinal terms, this acrimonious public debate has reflected very real and broad differences over policies to be pursued toward the non-Communist world, with Khrushchev advocating a relatively gradual long-term policy of victory through "peaceful co-existence" and Mao Tse-tung countering with a more aggressive, high-risk policy promising quick gains in Asia, Africa and Latin America.[32] Despite uncertainty and equivocation, the North Korean response to these divergent views since the fall of 1959 has revealed a marked predilection for Peking's more militant line in approaching its own number one foreign policy objective—the unification of Korea under Communist rule.

North Korean divergence from Khrushchev's foreign policy pronouncements first came to light in September 1959 when, in contrast with a prior Soviet declaration of neutrality, Pyongyang proclaimed its "full support" for the Chinese People's Republic in the Sino-Indian border dispute.[33] Despite occasional statements admitting the possible value of East-West negotiations, North Korean commentary after Camp David displayed open scepticism of one of the principal ingredients in

[30] Pyongyang radio broadcast, NKHS, April 15, 1960.
[31] KCNA, November 23, 1960.
[32] Zagoria, *loc. cit.*
[33] NCNA, Pyongyang, September 12, 1959.

Khrushchev's "peaceful co-existence" policy—his contention that a growing number of Western leaders, specifically including President Eisenhower, were sincere in their desire to reduce international tensions. Echoing Chinese Communist views, Pyongyang's propaganda in October charged that the United States "plans to solve the Korean question by war"; in December launched abusive personal attacks against the American President; and in January 1960 characterised the President's State of the Union Message as a "document of aggression and plunder, reeking of gunpowder."[34]

A number of developments in the spring of 1960 intensified the Sino-Soviet dispute on *bloc* strategy. In April Peking launched a public attack on the theoretical rationale of Khrushchev's foreign policy by reviving Leninist dicta on the inevitability of war, the intrinsically aggressive nature of imperialism, and the need for direct revolutionary action to promote international Communism.[35] The South Korean riots and subsequent overthrow of the Rhee government in April, the collapse of the summit conference in May and the violent Japanese demonstrations in June appeared to cast serious doubt on the efficacy of Khrushchev's détente policy and to lend substance to Peking's view of a rising tide of revolution in Asia. At the same time, the Bucharest Conference in June revealed to other *bloc* parties for the first time the fundamental nature and disruptive effect of the Sino-Soviet dispute.[36] The North Korean response to these developments revealed grave apprehension over the growing rift in Sino-Soviet relations and a consequent desire to remain neutral, and, at the same time, a continuing affinity for Peking's militant policy of unremitting struggle against the West in Asia.

After a significant delay, the Korean Workers Party issued a brief communiqué on the Bucharest Conference which balanced a declaration of "full support of the peace-loving foreign policy of the CPSU based on Leninist principles of co-existence" with an immediate reminder that United States imperialism, the "sworn enemy of the people," remained inherently aggressive.[37] More informative was Kim Il-sung's lengthy Liberation Day speech of August 14, 1960, which launched a new propaganda drive for "peaceful unification" of Korea.[38] Advocating a confederation of North and South for joint development of the national economy, the North Korean leader betrayed the propagandistic nature of this proposal by offering to rescue "our South Korean brothers from

[34] KCNA, January 9, 1960.
[35] See, for example, the article "Long Live Leninism!" in *Hung Ch'i*, April 16, 1960.
[36] For an apparently authentic account of the bitter exchanges at the Bucharest Conference, see the article by Edward Crankshaw in the *Observer*, London, February 11, 1961.
[37] KCNA, August 12, 1960.
[38] *Ibid.*, August 14, 1960.

starvation and poverty" and contending that "Socialist construction and the happy life of the people in the northern part of the republic are exercising tremendous revolutionary influence on the South Korean people." This stratagem, paralleling an earlier confederation scheme advanced by East Germany, conformed nicely with the Soviet prescription of final victory through "peaceful competition" and Khrushchev specifically endorsed it in a September 23 address to the United Nations General Assembly.

The dominant tone of Kim's speech, however, was one of struggle and militant appeals for direct revolutionary action in South Korea. Employing Chinese Communist invective, he depicted United States imperialism as "the most atrocious enemy of mankind and vicious enemy of the Asian people"; as "intensifying the arms race and aggravating tensions"; and as scheming to establish in South Korea "a military base for provoking another war." The only solution was "an anti-imperialist struggle" of the South Korean people, encouraged and abetted from the North, to compel "the United States aggressors . . . to withdraw." After drawing a parallel between South Korea and Taiwan, Kim asserted that "our people, joining forces with all Asian people, will struggle for the withdrawal of the aggressive United States Army from the whole area of Asia."

Communist China's high-ranking military mission to North Korea in October, noted above in the discussion of domestic policy, made much of this community of national interest. Indeed, when coupled with the charge that "modern revisionists" (*i.e.*, the U.S.S.R.) were attempting to "isolate" China and "to sabotage the friendship and unity" of China and Korea, General Yang Yung's blunt assertion of a special relationship between China and Korea appeared directed as much at the Soviet Union as at the West.

> China and Korea are separated by only a river. They are as dependent on each other as the lips and the teeth. What is concerned with one of them is also concerned with the other. The security of China is closely connected with the survival of Korea.[39]

In addition to reiterating a number of Chinese positions in the Sino-Soviet dispute on strategy, the Chinese military spokesman took sharp issue with an earlier judgment of Khrushchev that the United States was "not seeking a military conflict" in Korea.[40] Chief of mission Ho Lung on this occasion characterised "the United States aggressors in South Korea" as "bent on . . . unleashing a new aggressive war, attempting once again to invade the Korean Democratic People's Republic . . . annexing the whole of Korea . . . and launching a new world war. . . ."[41]

[39] *Jen-min Jih-pao*, October 24, 1960.
[40] *Pravda*, November 1, 1959.
[41] NCNA, December 2, 1960.

The upshot of this new initiative was to swing the North Korean régime even more solidly into line behind Communist China on two key issues of the Sino-Soviet dispute. First was the open espousal of Peking's charge that the " modern revisionists " were engaged in " covering up the aggressive nature of imperialism, beautifying imperialism and . . . denying the universal legality of socialist revolution." [42] Next was the enthusiastic seconding of the Chinese view that revisionism, not dogmatism and sectarianism as implied by Moscow, constituted the most serious ideological deviation within the international Communist movement. The reasoning advanced for this assessment was instructive. Within North Korea itself, revisionist elements had engaged in " counter-revolutionary plots " against the Korean Workers Party in the past and were still considered a clear and present danger. As a consequence of carrying on " socialist construction amid the fierce class struggle against United States imperialism . . . and domestic counter-revolutionaries," it was necessary to " arm the working people with hatred against imperialism and class enemies and bring them up as self-sacrificing and ardent revolutionary fighters." [43]

Thus on the eve of the Moscow summit conference in November 1960, North Korea appeared to be following the lead of Communist China in opposing Khrushchev's policy of relaxing international tensions. What is more, the considerations prompting this decision appeared to be strikingly similar to those animating Peking. As a country with unsatisfied territorial claims, it could only view friendlier relations with the West as tending to freeze the status quo. As a have-not nation determined to industrialise at maximum speed, it favoured external tension as a justification for sacrifice and a goad for production. And as one of the satellites plagued by chronic factionalism and purges, it appeared firmly committed to the pre-Khrushchev model of Stalinist totalitarianism.

Recent Trends

Developments at the Moscow Conference and after tend to confirm the existence of strong ideological bonds between Peking and Pyongyang. First, it appears significant that Mao Tse-tung and Kim Il-sung were the only Communist Party leaders in the *bloc* who did not attend this summit conference. More revealing have been North Korea's pointed declarations of friendship and support for Albania, the East European satellite which has consistently backed Communist China in the Sino-Soviet dispute and which, accordingly, has aroused Moscow's ire. In an unusually laudatory article in late November, the semi-official government

[42] Pyongyang radio broadcast of speech by Vice-Premier Chong Il-yong, NKHS, November 6, 1960.
[43] *Ibid.*

organ *Minju Chosen* asserted that " our two countries are very close to each other, like real brothers, because of common ideology and aims " and that " no force on earth can break the invincible friendship and solidarity between the Korean and Albanian peoples." [44] Moreover, authoritative editorial comment on the hybrid documents issued by the Moscow Conference has slighted Soviet-inspired passages for those expressing the more militant Chinese line.[45]

Most important of all, North Korea has explicitly recognised Communist China as co-leader of the Communist *bloc* following the Moscow Conference. By referring to " the Socialist countries led by the Soviet Union and the Chinese People's Republic," [46] the official organ of the Korean Workers Party appeared to be announcing the arrival of a new stage in intra-*bloc* relations. In view of its previous record of sympathy and support for Communist China, it was fitting that North Korea should reveal what was perhaps the most significant result of the Moscow Conference—the emergence of " polycentrism " as a reality within the international Communist movement.

[44] KCNA, November 29, 1960.
[45] See, for example, the Korean Workers Party resolution on the Moscow Statement in KCNA, December 24, 1960.
[46] Pyongyang radio broadcast, NKHS, December 11, 1960.

THE INTELLECTUALS

The brief blooming of the "hundred flowers" in 1957 revealed the tremendous pressure exerted by the Chinese Communist régime on the intellectuals. What has this pressure meant in individual cases? The next two articles, to be followed by others in future issues, examine in detail the lives of noted scholars in order to assess the effect of the Communist revolution on their intellectual development and personal fortunes.

An Intellectual Weed in the Socialist Garden: The Case of Ch'ien Tuan-sheng [1]

By CHALMERS A. JOHNSON

IF one were to imagine what occupation one might like to follow in a Communist state, it is unlikely that one would choose that of Western-trained political scientist. The intellectual apparatus associated with social science alone makes such an occupation untenable in the face of Communist ideology. Social science, as practised in the democracies, may be said to be non-existent in the Communist world. However, this does not eliminate the practical problem that faces the newly established Communist régime of what to do with those social scientists, and certain other types of intellectuals, who are already present. The problem becomes doubly complicated if the professors, journalists, and authors welcomed the advent of the new government and regarded themselves as "progressives"—as many of them did in China. One of the most striking ironies of *ssu-hsiang kai-tsao* (thought reform) in 1951–52 and of the rectification movement of 1957 was that the accused had, to varying degrees, all supported the régime when it came to power and had tried sincerely to work within its frame of reference.

This problem can be illustrated by an examination of the career of one individual who confronted it. Ch'ien Tuan-sheng, Harvard-educated (1924) political scientist and former Dean of the Law School of National

[1] The author gratefully acknowledges the helpful suggestions received from Professors Robert A. Scalapino and Choh-ming Li of the University of California, Berkeley, in the preparation of this article.

Peking University, did not welcome the Communists in 1949 with open arms. Nevertheless, he had satisfied himself that they were preferable to the Kuomintang in at least one sense ; they did not suffer from the popular distrust which the KMT had earned. Ch'ien did not flee from Peking in 1949 but instead supported the creation of the People's Republic. His reasons for remaining behind were not exclusively public-spirited for, in addition to his reputation as a scholar, Ch'ien was known in pre-1949 China as a person with moderate political ambitions. It may be surmised that his decision to remain on the mainland was motivated by the private hope of playing a larger part in the future political life of the country.

From the standpoint of the régime, however, the assistance of " bourgeois " intellectuals was of dubious value. At best, the union of Ch'ien and the régime was a marriage of convenience ; at worst, it was foredoomed to failure. A graph of Ch'ien's life after 1949 would be marked by two precipitous declines. The first occurred in the winter and spring of 1951–52, when he undertook to purge his bourgeois ideology. His reform was quite successful, and he enjoyed " rising expectations " during the next five years. Then, in 1957, Ch'ien Tuan-sheng was caught up in the storm of controversy which followed the Hundred Flowers period. He was forced to write a seriously incriminating confession and anathematised as the centre of the " Ch'ien Tuan-sheng clique."

Although Ch'ien himself is not a person of such overriding importance, his case is important because it typifies certain problems and attempted solutions which have plagued the Communist régime. Some of these problems are to find work for bourgeois intellectuals in the new division of labour and to guarantee their loyalty to the régime. Ch'ien's case is somewhat unique in that his academic specialisation—political science and constitutional law—was particularly hard to incorporate into a Communist system. The measure of success which he achieved is a testimony to both his acumen and his opportunism. Before further consideration can be given to the significance of Ch'ien's case, it is necessary to identify him and to review the course of events leading to his downfall in 1957. Who was Ch'ien Tuan-sheng prior to the occupation of Peking by the Communist troops on February 3, 1949?

Born in Shanghai in 1899, Ch'ien graduated from Tsinghua and then went to the United States for further education. After first obtaining a bachelor's degree from the University of North Dakota—an unlikely choice for a student from Asia—Ch'ien studied at Harvard University from 1920 to 1924. He was awarded the Master's Degree in 1922 and the Doctorate in 1924 by that institution. His doctoral dissertation was

entitled: *Parliamentary Committees: A Study in Comparative Government.* As was the fashion among many Chinese, Ch'ien assumed an occidental given name while abroad, becoming "Thomson S. Chien" at Harvard. He did not use that name again after his return to China.

The first indication of Ch'ien's intellectual orientation comes from his Harvard thesis. His treatment of parliamentary committees is legalistic and institutional, *i.e.*, characteristic of academic political science generally in the 1920's. Ch'ien's thesis does reveal a strong commitment to representative government and parliamentary democracy, and this commitment remains unchanged in his most recent work before the Communist take-over. Ch'ien modified his approach to the study of government over the subsequent twenty-five years in which he taught political science. He did this not by accepting new analytical propositions or systems of interpretation, but rather by abandoning certain axioms of political science which were current then. The most important of these ideas which he discarded was a belief that national or international law existed on a plane remote from politics, or that Chinese problems could be alleviated in any satisfactory way merely by the enactment of legislation. As a result, Ch'ien's written works show a long-range trend toward increased emphasis on purely descriptive analysis and toward the study of public administration.

When Ch'ien returned to China in 1924, however, international and constitutional law were still very important to him and to China. Some of the most controversial issues in the developing Nationalist revolution of the time were "extraterritoriality" and the rendition of the foreign concessions—issues which have traditionally been treated in a legalistic manner. As a lecturer at National Peking University, Ch'ien published articles and reviews in the influential *Social Sciences Quarterly* (*She-hui k'o-hsüeh chi-k'an*) which was edited at Peita. In addition to an article comparing various post-war European constitutions, Ch'ien's interests are revealed in the books which he reviewed.[2] He submitted reviews of Malborne Graham, *New Governments of Central Europe*; Julius Hatschek, *Deutsches und Preussisches Staatsrecht*; Léon Duguit, *Traité de Droit Constitutionnel*, and other similar works. An indication of Ch'ien's growing disillusionment with international law is contained in an article which he wrote in 1927 for the *Contemporary Review* (*Hsien-*

[2] See Ch'ien Tuan-sheng, "Hsin hsien-fa chung li-fa hsing-cheng liang chi-kuan chih kuan-hsi" ("The Relation Between the Legislature and the Executive in Some Recent Constitutions"), *She-hui k'o-hsüeh chi-k'an*, III: 3 (Spring 1925), pp. 389–409. Ch'ien's article was published in distinguished company; other contributors to this issue included Wang Shih-chieh, who was to become one of the highest KMT officials, a close associate and benefactor of Ch'ien, and with whom Ch'ien would collaborate on a book; and Chou Keng-sheng (S. R. Chow), who contributed an article on "The League of Nations and International Law." Ch'ien's reviews are included in volumes III and IV (1925 and 1926).

tai p'ing-lun).[3] Dealing with the status of the Shanghai concessions, this article is also significant in showing Ch'ien's patriotism and enthusiasm for the revolution. He was 28 years old when he wrote:

> The Great Powers occupy no less than twenty-three concessions in China, but Shanghai is more important than all the other twenty-two taken together.... Some imagine that by relying on informal negotiation, England—or any other country—will politely hand over the Shanghai Concession to us, but I fear that it will be more like taking meat from a tiger.... The Shanghai Concession is the imperialists' headquarters in China.... The Western-language newspapers with their wild words and reckless sniping, the foreign press agencies which spread rumours and mislead the people, the foreign banks which manipulate the currency, the foreign warships which obstruct the Yangtze—is there one that doesn't regard the Shanghai Concession as its centre... ?[4]

Ch'ien's article is an outspoken statement in favour of the Nationalist policy which demanded the return of foreign territories. As it actually turned out, the foreign governments refused to consider the immediate rendition of Shanghai, and the Nationalist Government became less anti-foreign. However, in March, 1928, the Chinese did obtain representation on the Shanghai Municipal Council.

During the early 1930s Ch'ien Tuan-sheng taught at National Central University, Nanking, where he held the position of Assistant Professor of Political Science in the College of Law. He was active in low-level Kuomintang affairs, and wrote the two-volume history which is his most important book in Chinese. The comprehensive *Min-kuo cheng-chih shih* (*History of Political Institutions Under the Republic*) was completed in 1937 by a research group at Central University headed by Ch'ien. It is a detailed, factual survey of the shifts in government that have taken place since 1912 and provides the basis for Ch'ien's later English-language book, *The Government and Politics of China*.[5] The first volume is devoted to a study of the central government, while the second deals with provincial, district, and local affairs. Some measure of the usefulness of this work is suggested by the fact that a subsidised

[3] With regard to the *Contemporary Review*, Fairbank and Liu comment: "Edited by professors chiefly of the National Peking University, this magazine represents the views of a group of modern liberal intellectuals whose chief emphasis has been on efficient governmental institutions and the rule of law, including a strong stand for China's rights and interests abroad according to international law." *Modern China, A Bibliographical Guide to Chinese Works: 1898–1937* (Cambridge: Harvard University Press, 1950), p. 192.

[4] Ch'ien Tuan-sheng, "Shou-hui Shang-hai tsu-chieh te p'o-ch'ieh" ("Hasten the Rendition of the Shanghai Concessions"), *Hsien-tai p'ing-lun* V: 122 (April 9, 1927), p. 5. Another of Ch'ien's articles for *Hsien-tai p'ing-lun* is "Mei-kuo tui-Hua te wai-chiao" ("America's foreign policy toward China"), V: 133 (February 5, 1927), pp. 5–9.

[5] Cambridge: Harvard University Press, 1950. Published under the auspices of the Institute of Pacific Relations.

translation was brought out in Japan in the midst of the Sino-Japanese war.[6]

Ch'ien moved west with the universities as the Japanese occupation spread. Rather than remaining with Central University, which went to Szechwan, Ch'ien joined Southwestern Associated University in Kunming which was an amalgamation of Peking, Tsinghua and Nankai Universities. He continued to write during the war,[7] but it was his other activities that were of greatest long-range importance. He re-established contacts with the United States. In Ch'ien's confession at the height of the struggle against the rightists (1957), he acknowledged that he had been in the United States four times in the period between 1937 and 1948. It was, he confessed, on these occasions that he established contacts with the "American spy-professor John K. Fairbank," sought the support of U.S. imperialists for the "Chiang Kai-shek reactionary gang" and attended meetings of the Institute of Pacific Relations.[8]

The first of these four visits took place in 1937 when Ch'ien accompanied Dr. Hu Shih in an effort to obtain both official and unofficial American assistance for China's war effort. Ch'ien next came as a participant in the Institute of Pacific Relations Study Meeting held at Virginia Beach, Virginia, from November 18 to December 2, 1939. Besides being a professor at Kunming, Ch'ien by then was also a member of the People's Political Council, which had been established in Hankow in 1938. Ch'ien presented a sixteen-page paper to the Virginia Beach Conference entitled "China's National Unification: Some Political and Administrative Aspects." Six years later, Ch'ien was again a member of the China Committee attending an I.P.R. meeting—this one the Ninth Conference of the I.P.R. held at Hot Springs, Virginia, from January 6 to 17, 1945. He was accompanied by such well-known figures as Chiang Mon-lin, Carson Chang, Choh-ming Li, and others. Ch'ien did not present a paper at this conference.

On his fourth trip to the United States, Ch'ien came as a visiting scholar to Harvard University. He arrived in the United States in

[6] *Saikin Shina Seiji Seido Shi*, a translation by Oikawa Tsunetada of volume one of *Min-kuo cheng-chih shih* for the Asia Research Institute, Keio University with the support of funds from the Mochizuki Grant for research into modern China (Tokyo: Keio University Press, 1943). Ch'ien's introduction is dated June 16, 1937, at Nanking Central University, but the Chinese editions were not published until 1939 (Changsha) and 1945 (Chungking).

[7] About 1942 Ch'ien brought up to date Wang Shih-chieh's *Pi-chiao hsien-fa* (Comparative Constitutional Law) which Wang had originally published around 1925. Ch'ien made the first revision of this work in 1936. He also contributed various articles to *Hsin ching-chi* (The New Economics) which was published in wartime Chungking.

[8] Ch'ien Tuan-sheng, Dean of the College of Political Science and Law of Peking, "My Crimes," *Jen-min Jih-pao* (*People's Daily*), August 6, 1957; SCMP 1596 (August 22, 1957), pp. 35–40. Ch'ien's statement was read publicly before the Second Session of the Second Municipal People's Congress of Peking, August 4, 1957.

December, 1947, and returned to China at the end of 1948. He was already well-known in the West for an article published in *Pacific Affairs* in 1943,[9] but his reputation among Western scholars rose with the publication of a second article for *Pacific Affairs* and a long work entitled *The Government and Politics of China*. His 1948 article, "The Role of the Military in Chinese Government," typified Ch'ien's final approach to Chinese politics before the Communist take-over.[10] The article is largely a description of the origin, structure and changes in the National Military Commission of the Nationalist Government. Ch'ien emphasises Chiang Kai-shek's central position within this body and Chiang's military background and orientation. This information is then used to support Ch'ien's view that,

> One of the significant differences which distinguishes good governments from bad is the subordination of military power to political power and of military personnel to political personnel. . . . The nearest approach to a powerful check on military power in China since the Revolution of 1911 was the reorganised Kuomintang in its early years. But when Chiang Kai-shek acquired a position of leadership in the Kuomintang without at the same time outgrowing his military mentality, the Party ceased to be such a restraining influence.[11]

Ch'ien's article is pedestrian in its general comments on the relationship between a military establishment and "good government." This part of his article is, in fact, a political statement directed against Chiang Kai-shek and the latter-day Kuomintang—but not on behalf of the Communists. His statement is, rather, on the side of those diverse elements which hoped to see democracy and parliamentarianism emerge from the period of one-party tutelage in China. When he asks, "Has there been since the establishment of the Republic any war except the war against Japan which has been popular and for which money has been willingly spent by the people?" he seeks to discredit the supposed propensity of generals to solve problems by war. The fact that his question echoes Communist protests does not make Ch'ien Tuan-sheng a Communist.

Ch'ien's attitude towards the Communists in the early 1940s has been made quite clear by Ch'ien himself. Ch'ien's singularly forceful remarks on this subject are quoted in a letter from Professor Quincy Wright, University of Chicago, to Mr. E. C. Carter, Secretary-General of the

9 "Wartime Local Government in China," *Pacific Affairs* XVI: 4 (December 1943), pp. 441–460. This is chiefly an analysis of the factors that led to the restoration of the *pao-chia* system in the 1930s. Ch'ien is not critical of the Central Government in view of the immensity of the problems facing it, but he raises the question of what influence the *pao-chia* system will have on the long-term objective of establishing local self-government.

10 *Pacific Affairs* XXI: 3 (September 1948), pp. 239–251.

11 *Ibid.* p. 239.

Institute of Pacific Relations, dated August 20, 1941.[12] Professor Wright writes:

> I have just received a letter from Tuan-sheng Chien from Kunming, China. . . . As a Left, but not Communist Chinese, he is afraid China will be squeezed by the Communists on the one hand and the "Shanghai minds" on the other.
>
> Perhaps you have got this same letter, but if not I am sure you would be interested in the following paragraph: "The attitude of the left intelligentsia of America towards the Chinese Communists and the latter's quarrel with the Central Government is most unintelligible to me. I know very few of that left. . . . But I do think that that propaganda [pro-Yenan propaganda from left-wing sources in America] is very harmful in the sense that it interferes with our liberty of action in regard to the disloyal troops of Communism and prevents American public opinion from otherwise exerting a great and healthy influence on Chungking which needs to be criticised and also to go very much further to the left (again not Communist)."

Further on in the letter Professor Wright quotes Ch'ien to the effect that as a result of virulent anti-Chungking propaganda in America, ". . . the task of true reformers of the liberal left of China will be made only more difficult." Ch'ien undoubtedly modified his attitude toward the Communists over the years, but he himself remained exactly what the cadres later accused him of being: a "democratic individualist."

In early 1949, when the Communists arrived in Peking, Ch'ien was prepared to work with them in the interest of his nation's welfare. "As a Chinese who wants to adapt himself to the changing times, I sincerely admire the creators of the new order, although I myself . . . be misunderstood."[13] He actively participated in political affairs while at the same time maintaining his position as Dean of the Law School at Peking University. He was, for example, a representative of the "social science workers" at the first Chinese People's Political Consultative Conference held in September, 1949—the *ad interim* parliament of the new state. At this time Ch'ien had sufficient confidence in his position to undertake interpretations of the new order in print. Professor Derk Bodde, who was in Peking at the time, noted an article by Ch'ien published in the *Progressive Daily* (June 5, 1949), in which he demonstrates to "citizen capitalists" the importance and security of their role in the new united front.[14] Ch'ien was also named one of six vice-presidents of the Chinese

[12] U.S. Senate, 82nd Congress, 2nd Session, *Hearings Before the Sub-committee to Investigate the Administration of the Internal Security Act and Other Internal Security Laws of the Committee on the Judiciary . . . on the Institute of Pacific Relations* (Washington: Government Printing Office, 1952), Part 14, p. 5253, Exhibit no. 1216.

[13] Quoted from a letter by Ch'ien to his Harvard colleague, Professor Fairbank, dated March 9, 1949. This excerpt was included in his 1957 confession. See "My Crimes," *Jen-min Jih-pao*, August 6, 1957.

[14] Derk Bodde, *Peking Diary* (New York: 1950), pp. 195-196.

People's Institute of Foreign Affairs, an organisation established in December, 1949, for inviting foreign political leaders to visit China. At Peita, he personally taught courses in the following subjects: New Democracy, the Chinese Government, and the Capitalist Countries.

By the close of 1950, however, tensions were beginning to build up. Ch'ien attempted to resign from the post of Dean in November, 1950, but did not succeed. The following year saw the end of the Party's tolerance of "business as usual" on the campuses. The first active measure taken by the leadership in its dealing with academicians was to transport them from the urban areas to villages in order to witness land reform. One of the factors Ch'ien stresses in his self-critiques, written in late 1951 and early 1952, is the great influence that participation in land reform had on his subsequent development. The earliest of the so-called Agrarian Reform Observation Groups, composed of sixty-three professors, left Peking for the countryside in February. Here is a description of their activities:

> In the course of their observation tour, they took part in "accusation meetings," "reckoning meetings," "turning the tables celebration meetings," and "spring ploughing production discussion meetings" of the peasants . . . saw for themselves how the peasants are carrying out the agrarian reform in a correct manner in the confiscation, levying and distribution of land, together with actual attempts on the part of the landlords to sabotage the agrarian reform movement.[15]

While most reports contend that these observation groups were organised spontaneously, one report describing a mission composed of Peking bureaucrats notes that it was formed "in accordance with the directive of Chairman Mao Tse-tung."[16] Ch'ien himself went to Szechwan along with ninety-eight other professors, government officials, and leaders of the democratic parties. They arrived in Chungking by plane on May 17, 1951, and thus began Ch'ien's ultimately fruitless task of attempting to rid himself of bourgeois ideology.

Both the reorganisation of educational institutions and the ideological reform of intellectuals began in October, 1951. The immediate reason which was given for ideological reform linked it to the policy of committing the educational system to the service of the state.

> The experiences gained during the past two years serve to prove the fact that if the teachers in institutions of higher education persist in adhering to the reactionary thoughts of the British and American bourgeois class, if they persist in sticking to their personal individualism, objectivism and sectarian point of view, and fail to carry out true

[15] "Agrarian Reform Observation Group of Peking Professors Leaves Hunan for Peking," New China News Agency (NCNA), Changsha, March 12, 1951; *Survey of the China Mainland Press* (SCMP) (Hong Kong: U.S. Consulate-General) 82, pp. 16–17.

[16] "Peking and Tientsin Agrarian Reform Inspection Mission Sent Out," NCNA, May 8, 1951; SCMP 103, p. 39.

> reform, then all phases of the reform of higher education, the reorganisation of faculties and departments, curriculum reform, the reform of teaching methods, and the like, will flounder. . . .[17]

It must not be overlooked, of course, that there are more basic reasons for subjecting reformist (*i.e.*, non-Bolshevik) elements to a programme of intense indoctrination, and that these are fundamental propositions of Leninist theory and Maoist practice. The campaign was actually begun in Peking with a five-hour lecture delivered by Chou En-lai to 3,000 faculty members of the leading universities of north China on the afternoon of September 29, 1951.

It is to Ch'ien's credit that he quickly perceived the path that had to be taken and resolutely set out on it. He wrote one article, entitled "I Will Discard the Burden of Old Knowledge," as early as October 10, and he had a more complete statement in the *People's Daily* by November 6.[18] In the latter article, he credits his work with the Agrarian Reform Observation Group as being instrumental in providing him with an improved viewpoint. He castigates his capitalist education but makes no mention then (or until 1957) of his other, more recent contacts with the United States. One item in his confession seems stronger and more optimistic than in some of those written by others ; this is his acceptance of the technique of criticism. "I welcome all others who can subject me to the most merciless and penetrating criticism, while I also hope to be given the chance to criticise others in a similar manner. I have complete faith in mutual criticism as a means for mutual help and as the only effective means for ideological improvement."[19] Ch'ien took criticism and self-criticism so to heart that he exercised the new tool in this same article. He criticises his own performance as a member of the standing committee of the University Administration Committee which administered Peita until the summer of 1951. Then, forthrightly, he says:

> It has to be pointed out here that . . . Chairman T'ang Yung-t'ung of the University Administration Committee should be held to bear even a greater part of the responsibility than myself. In his "sagacious" concern for his own well-being, Chairman T'ang never used to raise his voice against anybody, nor express a clear-cut stand on any doubtful or knotty problem. Under his leadership it was impossible to get rid of Peita's traditional laxity and liberalism.[20]

[17] Ch'ien Chün-jui, Vice-Minister of Education, in *Hsueh-hsi* V: 1 (November 1, 1951); CB 169, p. 5.

[18] Ch'ien Tuan-sheng, "To Study for Self-Reform so as Better to Serve the Fatherland," *Jen-min Jih-pao*, November 6, 1951; CB 169, pp. 30–32. The article of October 10, 1951, is cited in CB 169, p. 45.

[19] *Ibid.*

[20] *Ibid.* Ch'ien actually admired T'ang. Only a few years earlier Ch'ien had written, "The best account in Chinese [on Buddhism] is the recent work of T'ang Yung-t'ung, *Han Wei Liang-Chin Nan-pei-ch'ao fo-chiao shih* (*A History of Buddhism in the Han, Wei, the two Chin, and the Southern and Northern Dynasties*)," *The Government and Politics of China*, p. 403, n. 25.

The tone of Ch'ien's next confession is somewhat more serious.[21] He reviews his activities since the liberation and divides them into two stages. At first he did nothing but study Marxism-Leninism and the thought of Mao Tse-tung. He states that he felt gratitude toward the Party in this period for its having carried out the revolution, but he observes that this gratitude was superficial as it arose from personal interests. Then came his ideological reform which consisted of work in agrarian reform, the teachers' study movement, and the three-anti and five-anti movements. He concludes:

> It was only through the loving care of the Communist Party that I was enabled to enhance my loyalty and love for the Fatherland, feel younger, increase my powers of studying and assimilating new things, and redouble my faith and courage in work. . . . All thanks are due to Chairman Mao and the Party for curing my disease, saving my soul, and giving me the education to enable me to serve the people.[22]

By the close of 1952, Ch'ien's fortunes were again improving. The reorganisation of higher education and his adroitness in adjusting ideologically to the new order actually resulted in a net gain for him. He became President of the new Peking College of Political Science and Law, established November 24, 1952.[23] This institution, comprising 600 students, was a combination of the departments of law and political science, and parts of the departments of sociology originally at Peking, Tsinghua, and Fu Jen Universities. In 1952, Ch'ien also began another activity which was of long-range importance. He was appointed one of seven members of the Editorial Board of the English-language propaganda journal *China Reconstructs*. Ch'ien's name remained on the masthead until the issue of March 1958, the date of his expulsion from the Chinese People's Political Consultative Conference. Earlier in 1952, however, Ch'ien's return to favour was already signalised by his publication of an article in *China Reconstructs*. It was entitled, "How the People's Government Works."[24] The article is propagandistic and superficial (the Communist Party is mentioned only once in an article on the governing of China), but it does give quite a lot of information on the united front bodies which Ch'ien knew from his own

[21] Ch'ien Tuan-sheng, "The Communist Party Educated Me," Peking, *Kuang-ming Jih-pao*, July 1, 1952; CB 213, pp. 32–34.

[22] *Ibid.* pp. 33–34. To call Ch'ien's transformation "brain-washing" is a misnomer and a hoax. The process of intense indoctrination of necessarily willing participants in a controlled milieu needs no mysterious embellishments to underscore its seriousness. However, the events of 1957 confirm the fact that individual opinions are not so easily remade.

[23] NCNA, November 27, 1952; SCMP 461, p. 16.

[24] *China Reconstructs* No. 4 (July-August 1952), pp. 8–12. Another frankly propagandistic article by Ch'ien in English is his "Chinese-British Friendship," *People's China* No. 16 (August 16, 1954), pp. 14–21.

membership: the CPPCC (Chinese People's Political Consultative Conference) and the local Peking People's Representative Conference.

Ch'ien's writing about China in foreign languages is significant as a manifestation of the new function found for him by the Party. What to do in the new China with the middle-aged holder of an American Ph.D. was a problem that must have disturbed the Party often. A solution was found in the propaganda field. Since the degrees and reputations of men like Ch'ien impressed intellectuals in such countries as India and Japan, it was logical to utilise them in cultural exchange and peace mission activities. The only question was whether or not they were trustworthy, and presumably ideological reform resolved any doubts on that score. There is also reason to believe that Ch'ien himself foresaw diminishing returns as a teacher of politics to the Communists and welcomed this opportunity to advance his own position. In any case, as the following chronicle of junkets and banquets reveals, Ch'ien Tuan-sheng seemed, from 1953 on, more in the service of Kuo Mo-jo than of the Peking College of Political Science and Law.[25]

The first of Ch'ien's new activities which was publicised was a trip to Korea.[26] He was included as a minor official on the "Third Chinese People's Comfort Mission" which was organised by Kuo Mo-jo's China Peace Committee. The mission, led by General Ho Lung, departed for Korea amidst the cheers of a thousand well-wishers at Peking Station on October 4, 1953.[27] In the spring of the following year, Ch'ien became a board member of the new federation of organisations interested in international cultural relations. The new body, named "The Chinese People's Society for Cultural Relations with Foreign Countries," had ten constituent organisations, including the Chinese People's Institute of Foreign Affairs, of which Ch'ien had been a Vice-President since December 1949. There were 115 other board members besides Ch'ien.[28]

The next indicator of Ch'ien's improving position was his election as a delegate to the First National People's Congress (NPC) (September 15, 1954). Truly, everybody who was anybody in China was included among the 1,226 deputies. The principle of representation in the NPC is regional, differing from the CPPCC in which the basis of representation

[25] Kuo Mo-jo, novelist, poet, literary critic and scholar, is the doyen of Chinese "peace workers." His posts include the Chairmanship of the World Peace Congress and of the Academia Sinica, and the Vice-Chairmanship of the Sino-Soviet Friendship Association. He is also a winner of the Stalin Peace Prize.

[26] The most complete list of Ch'ien Tuan-sheng's activities is included in Kasumigaseki Society, *Gendai Chūgoku Jinmei Jiten (Biographical Dictionary of Modern China)* (Tokyo: 1957), p. 299, which was used as a basis for checking the press.

[27] "Third Chinese People's Comfort Mission Leaves for Korea," NCNA, October 4, 1953; SCMP 662.

[28] "Chinese People's Society for Cultural Relations with Foreign Countries Founded in Peking." NCNA, May 3, 1954; SCMP 801, pp. 21–24.

is political grouping. The principle of distribution is either place of work or native place, though there is no consistency of application ; Mao was elected from Peking while Chu Teh was elected from Szechwan. Ch'ien was one of sixty-three deputies elected from Shanghai, his place of birth. At the Congress itself, Ch'ien was one of thirty-three members of the Bills Committee, a sub-group with few powers.[29] The probable reason for Ch'ien's inclusion in the NPC is the fact that the Communist Party carefully prevented its deputies from exceeding more than 25 per cent. of the total representation, or more than one-third of any one delegation.[30]

Three months later, in December 1954, Ch'ien participated in the Plenary Session of the Second National Committee of the CPPCC.[31] Ch'ien was not a member of the *National Committee* (190 members) of the *First* CPPCC, but only of the full body (585 delegates). Actually, the Second *full* CPPCC was never elected, but only its National Committee (559 members) which was, however, almost as large as the first full CPPCC. With the convening of the First National People's Congress, the CPPCC lost its " legislative " functions and reverted to its role as " the organisation of the Chinese People's Democratic United Front." Theoretically, this means that it plays a role as a " mobilising and rallying " point for the whole country, as the united front did in the war against Japan. In practice, it is largely a consolation prize for those not elected to the NPC. This does not apply to Ch'ien who was elected to both. In the First CPPCC (September 1949), Ch'ien represented the " social science workers," but in 1954 he was one of sixteen representatives of the " public bodies for peace and friendship with foreign countries "—a shift which was indicative of the new course his career was taking.

A turning point in this new course was reached the following month (January 1955), when Ch'ien was selected leader of a five-man Chinese delegation to the Forty-Second Session of the Indian Science Congress in New Delhi. After the close of the Science Congress on January 9, Ch'ien's group toured India, calling at Ahmadabad, Bombay, Poona, and other cities where they visited scientific research institutes before arriving back in New Delhi on January 16. Ch'ien himself gave a speech in Bombay on science in new China, and a report in New Delhi on the Constitution of the C.P.R.[32] On January 18, Ch'ien and one other

[29] Shanghai election, NCNA, August 18, 1954 ; SCMP 874, pp. 50–51. Bills Committee, NCNA, September 28, 1954; SCMP 898, pp. 8–9.

[30] See " Composition of the First National People's Congress," *Current Background* (CB) (Hong Kong: U.S. Consulate-General) 290.

[31] " Second National Committee of Chinese People's Political Consultative Conference (December 1954)," CB 308.

[32] " Chinese Scientists Honored in Delhi," NCNA, New Delhi, January 17, 1955; SCMP 970.

member of the delegation flew to Karachi to attend the Seventh Session of the Pakistan Association for the Advancement of Science. The other three members of the delegation remained in India as guests of the government to attend the Indian National Day celebrations. The Pakistani conference, held at Bahawalpur, lasted until January 26 and was attended by some 400 delegates, including representatives from the Soviet Union, Canada, Japan, Great Britain, West Germany, and the United States.[33] Ch'ien's background and knowledge of English may have been crucial factors in the decision to send him to India and Pakistan, but his being named as leader of the delegation argues for his having also attained a position of some trust in the régime.

April of 1955 saw Ch'ien Tuan-sheng again engaged in CPPCC affairs. At the First Plenary Session of the First Peking Municipal Committee of the CPPCC (235 members), Ch'ien delivered a committee report and was elected one of seven vice-chairmen.[34] In June, he was on the road again, this time as one of a delegation of forty-five to the World Peace Assembly held in Helsinki. The leaders (3), including Kuo Mo-jo and Mao Tun, flew while the members (42), including Ch'ien, took the train. On July 15, some fifty-five " peace delegates " from other countries returned to China with the Chinese delegation and, after a large banquet in their honour, proceeded to tour China accompanied by the Chinese delegation.[35]

The *summum bonum* of Ch'ien's career as a culture worker came in November and December of 1955. In his capacity as Vice-President of the Chinese People's Institute of Foreign Affairs, Ch'ien was official host to the twenty-seven-member delegation of the Japanese National League for the Protection of the Constitution. The Japanese delegation included former Prime Minister Katayama Tetsu, Chairman of the National League ; Fujita Tōtaro, a representative of Sohyo, the labour federation ; Ono Koichi, chairman of the delegation ; and Endo Saburo, a former lieutenant-general. Following the group's arrival in Peking by air on November 9, there was an endless series of banquets attended by such persons as Chou En-lai, Ch'en Yun, P'eng Chen, and, as host, Ch'ien Tuan-sheng. A joint communiqué calling for normalisation of Sino-Japanese relations resulted from the Chou-Katayama talks and was ceremonially signed. Mao Tse-tung met the delegation on the afternoon of November 28, with a relatively small group of dignitaries, including

[33] Arrival in Karachi, NCNA, January 19, 1955; SCMP 972, p. 13. Bahawalpur Conference, NCNA, January 22, 1955; SCMP 975, p. 11.

[34] " CPPCC Peking Municipal Committee Holds First Plenary Session," NCNA, April 28, 1955; SCMP 1041, pp. 38–39.

[35] " Namelist of Chinese Delegation to World Peace Assembly," NCNA, June 8, 1955; SCMP 1066, p. 17.

Chu Teh, Liu Shao-ch'i, Chou En-lai, and Ch'ien Tuan-sheng, present.[36] A farewell banquet was given that evening at which Tung Pi-wu gave the major address. On November 30, the delegation flew to Shanghai accompanied by Ch'ien to visit Jung Yi-jen, "one of China's leading national capitalists."[37] The Shanghai Trade Union Council honoured the group at a reception attended by more than 2,000 people, and then the visitors paid their respects at the tomb of Sun Yat-sen in Nanking. The journey ended on December 6, after a tour of Canton and a Mayor's banquet, with Ch'ien bidding the Japanese farewell at Shumchun (Shen-Ch'üan).

The following spring, Ch'ien was off to another meeting. He departed by airplane for Stockholm on March 29, 1956, to attend a special session of the World Peace Council of which he was a member of the Board of Directors (July, 1955 to March, 1956). Ch'ien's fellow delegates included Liu Ning-yi, the labour leader and Communist Party member; two former KMT generals, Ch'eng Ch'ien and Fu Tso-yi; a Moslem Sheikh and eleven other peace workers of varied backgrounds.[38] The incongruous composition of this delegation illustrates certain characteristics of the new order in China prior to the 1957 upheaval. The external façade, if not the internal reality, of Chinese political life was still based on the idea of unity among several classes and groups which were merely under the guidance of the Communist Party. Many persons whose only continuing usefulness to the Communists lay in their reputations were being utilised in supporting this image overseas. Ch'ien must have realised that, despite his ideological reform, he had never been given responsible work and that his services could, in fact, be dispensed with on a moment's notice.

Ch'ien was not the only intellectual at this time who felt himself to be politically underemployed. During the period just described he was closely associated with a group of men of similar backgrounds to his own. They were not members of the Communist Party but were concentrated in the so-called "democratic parties," such as the Democratic League, which possessed all the trappings of power but actually had none. These men were in the anomalous position of being kept fairly well-informed, attending a great many meetings and assemblies, "rubber-stamping" policies determined elsewhere, but of never themselves making policy or taking action. The frustration of this position served to aggravate their latent hostility toward the régime. Their criticisms of

[36] Arrival of Japanese delegation, NCNA, November 9, 1955; SCMP 1168, p. 34. Reception by Mao, NCNA, November 28, 1955; SCMP 1179, p. 26.
[37] "Japanese Delegation Visits Shanghai," NCNA, December 3, 1955; SCMP 1183, p. 40.
[38] "Chinese Peace Delegates to World Peace Council," NCNA, March 29, 1956; SCMP 1261, p. 52.

the Communist Party in the Hundred Flowers campaign were not motivated so much by idealistic goals as they were by a belief that the Party could be pressured into giving them greater powers. Ch'ien Tuan-sheng was a member of this vocal group, which came to be known, in 1957, as the "Lo Lung-chi—Chang Po-chün clique."[39] Its leadership, concentrated in the Democratic League, was selected as the major scapegoat when the Hundred Flowers policy was reversed.

Ch'ien himself joined the Democratic League in 1952 and rose very rapidly.[40] He had close contact with Lo Lung-chi and Chang Po-chün, both of whom were key figures in the Democratic League from the time of its inception. Ch'ien knew Lo at Tsinghua University, from which they both graduated; and Lo, like Ch'ien, possessed an American Ph.D. degree in political science (Columbia, 1928). In April 1955, Lo asked Ch'ien to join him in sponsoring a forum at the Peking "Cultural Club," an organisation for college professors of science, engineering, the arts, and law. Ch'ien agreed and the forum met to discuss such topics as the study of Soviet techniques, teaching and research conditions, and relations between old and new professors. It was an ideal setting for nourishing grievances.[41]

With regard to his relations with Chang Po-chün, Ch'ien remarked in his August 1957 confession: "Chang Po-chun is a 'sidewalk politician' whom I used to despise. When I joined the Democratic League, he spoke very highly of me, saying that I was a great intellectual and an important figure in higher educational circles, and that my position in the Democratic League should go up three grades."[42] As if to confirm Chang's high opinion of him (or perhaps as a result of it), Ch'ien became, in February of 1956, one of 144 members of the Democratic League's Central Committee, and also a member of the 33-man Standing

[39] Both Lo and Chang, Ministers of the Timber Industry and of Communications, respectively, were members of the Standing Committee of the Central Committee, China Democratic League. MacFarquhar comments on their activities as follows: "Lo and Chang Po-chün seem to have wanted to make sure that if the democratic parties were to get more power they personally would benefit. . . . They were well aware that there was to be no fundamental change in the state system, whatever others may have thought. Chang's 'two chamber' proposal [the CPPCC was to be the upper house in a bicameral legislature], which significantly was regarded as quite harmless when first advanced, was certainly an attempt to increase the role of the democratic parties; but it did not in any apparent way conflict with the Communist Party's official policy which was to do just that." Roderick MacFarquhar, ed., *The Hundred Flowers Campaign and the Chinese Intellectuals* (New York: Praeger, 1960), pp. 264–265.

[40] "Ch'ien Tuan-sheng shih cheng-fa-hsüeh-chieh tê yu-p'ai yin-mou-chia" ("Ch'ien Tuan-sheng is a Rightist Conspirator of the Political and Legal Circles"), *Hsin-hua Pan-yueh-k'an* No. 17, 1957, pp. 174–176 [Reprinted from *Jen-min Jih-pao*, July 20, 1957].

[41] Ch'ien Tuan-sheng, "Wo te tsui-hsing" ("My Crimes"), *Jen-min Jih-pao*, August 6, 1957; SCMP 1596, pp. 35–40.

[42] *Ibid.*

Committee of the Central Committee.[43] His colleagues on the Central Committee included Chang, Lo, Fei Hsiao-t'ung, Feng Yu-lan, P'an Kuang-tan, and other prominent intellectuals. Ch'ien also headed the Democratic League Committee at the Peking College of Political Science and Law.

Ch'ien's advancement to the inner circle of the Democratic League came at an important time. The first significant break in the policy of control and ideological reform of the intelligentsia was announced at the Communist Party's special session on intellectuals, held from January 14 to 20, 1956. At that conference, Chou En-lai delivered his well-known address calling for greater freedom in scholarly activities and promising intellectuals a higher standard of living.[44] The Second National Congress of the Democratic League, which closed on February 20, 1956, and at which Ch'ien was named to the Central Committee, had as its chief objective the studying of Chou En-lai's speech. These meetings were followed, in May, by Mao's slogan, "Let a hundred flowers bloom, let a hundred schools contend," and, in the autumn of 1956, by the severe jolt given the Communist world by the Hungarian revolution. As a result of these internal pressures, the prospects for men like Lo, Chang, and Ch'ien were greatly improved. It now seemed possible that their previously empty roles might be substantially up-graded; a moderate degree of hope and ambition enlivened the activities of the "democratic" parties. Undoubtedly, many discussions took place among the Democratic League's Central Committeemen on this developing situation —discussions which, in retrospect, were to look suspiciously like an "anti-Party plot." It is unlikely that there was such a plot, or that the Communist Party seriously thought that there was (the Communists had known of the political ambitions of the men involved for years), but the so-called plot turned out to be a convenient cover for the later anti-rightist campaign.

This anti-rightist campaign grew out of the rectification or *cheng-feng* movement which was launched within the Communist Party on April 28, 1957. The immediate objectives of the rectification were the elimination of subjectivism (*pen-wei chu-i*), sectarianism (*tsung-p'ai chu-i*), and bureaucratism (*kuan-liao chu-i*) among Party members. Mao Tse-tung had responded to the mounting popular outcry against certain Party practices with his famous speech "On the Correct Handling of Contradictions Among the People." He delivered the speech to a Supreme State Conference, held between February 27 and March 1, 1957, and attended

[43] "Second National Congress of China Democratic League," NCNA, February 20, 1956; SCMP 1236, pp. 5–11.

[44] Chou En-lai, "On the Question of Intellectuals," NCNA, January 29, 1956; CB 376, pp. 13–15.

by more than 1,800 persons, including all the CPPCC members then in Peking. Ch'ien certainly must have attended and heard Mao's statement. On March 5, immediately following Mao's speech, the 1957 session of the CPPCC National Committee opened in Peking. Many of the speeches made by the Chang-Lo group at this meeting reflect their increasing conviction that the Party was about to grant them a larger voice in governmental affairs.[45]

On May 8, Li Wei-han, Director of the Communist Party's United Front Work Department, announced an unusual feature of the rectification drive: in the spirit of Mao's speech, the "democratic parties" were asked to criticise the Communist Party and thereby to assist the Party in its efforts at self-criticism. The response throughout the country was startling—so much so that the Party was unable to admit that the criticisms were made in good faith.[46] It interrupted its rectification movement in order to launch a vigorous campaign for the exposure of "rightists." The Party charged that the criticisms made after May 8 were dishonest: that they were, in fact, the products of discontent fomented within the ranks of the people by a small group of rightist conspirators. These persons were collectively identified as the Chang-Lo Clique and described as follows:

> The Chang-Lo alliance has hard core cadres at every place and some bases have been established. The Peking base of the Chang-Lo alliance is manned by the hardcore cadres, including Tseng Chao-lun, Fei Hsiao-t'ung, P'an Kuang-tan, Wu Ching-ch'ao, Huang Yao-mien, *Ch'ien Tuan-sheng*, Yeh Tu-yi, Fan P'u-chai, Chang Chih-ho, P'u Hsi-hsiu, and Ch'en Hsin-kuei. They controlled the Central Committee of the Democratic League and issued orders to the League organisations at all levels throughout the country (emphasis added).[47]

There were, of course, numerous victims of the purge besides the Chang-Lo Clique. These included Lung Yun, former Nationalist governor of Yunnan; Huang Shao-hsiung, member of the Central Committee of the Revolutionary Committee of the Kuomintang; Ch'u An-p'ing, Chief Editor of the *Kuang-ming Jih-pao*; and many others.

The May 8 directive calling for criticism from non-Party groups specified that the remarks be made in "forums" rather than in the more common "denunciation" meetings. Therefore, beginning on May 27, the Chinese Political Science and Law Association organised a series

[45] See Lo Lung-chi, "Band the Non-Party Intellectuals Closer with the Party" (speech delivered March 18), *Jen-min Jih-pao*, March 23, 1957; and Chang Po-chün, "Bring the Role of the Democratic Parties into Full Play" (March 18), *Jen-min Jih-pao*, March 19, 1957; CB 444.

[46] See MacFarquhar, *op. cit.*, for a detailed presentation of anti-Party outpourings from all quarters.

[47] *Kuang-ming Jih-pao*, August 19, 1957; SCMP 1699, p. 31.

of forums among Peking "judicial circles" for the purpose of criticising Party work in the legal field. Ch'ien, as Dean of the College of Political Science and Law, attended these forums and, during the first six, he and other rightists in the judicial circles allegedly attacked the Party. The counter-attack began on June 11 and lasted throughout the rest of the year.

There is no record of Ch'ien's having made a serious anti-Party speech at the judicial forums during the "blooming" period. His only recorded remark is that Party members did not treat him with respect.[48] However, in the anti-rightist forums after June 11, many persons came forward and charged Ch'ien with having made incriminating statements at some time in the past. At the forums of June 21 and 25, one Ch'en Kuang-chung, a lecturer at Peking College of Political Science and Law, said:

> When the *cheng-feng* started, there was an incorrect way of looking at things current among the students, namely, that "after a Party-member student graduates, he will work as a judge, but that after a non-Party student graduates, he will work as a clerk." Ch'ien Tuan-sheng, as Dean of the College, legally ought to criticise this type of statement. However, he actually replied to the students that ". . . At present, sectarianism is strong among leading legal circles—old cadres oppress new cadres, worker and peasant cadres oppress intellectuals—so that intellectuals and new cadres can't rise."[49]

A few weeks later this same story was repeated, but this time it was cited as a rightist lie initiated by Ch'ien to stir up the students.[50] Another anti-Party remark was ascribed to Ch'ien by Lou Pang-yen, one of Ch'ien's former students and himself soon to be attacked as a member of the Ch'ien Tuan-sheng clique. Lou said, at the July 10 forum, that Ch'ien had commented to him, "Although we took down Chiang Kai-shek's picture from the T'ien An Men and replaced it with Chairman Mao's, I still can't tell the difference."[51]

There were a number of attacks on Ch'ien's personality, describing him as a snob, an individualist, a man divorced from the masses, and one who puts on airs.[52] These will be ignored here as they are unverifiable; the possibility remains, however, that personality clashes may have played a part in Ch'ien's downfall. On the other hand, the

[48] *Kuang-ming Jih-pao*, June 7, 1957; quoted in MacFarquhar, p. 86.

[49] "Ch'ien Tuan-sheng ifan-ch'ang-t'ai to-fang huo-tung wei-tê shih-shen-ma?" (Why does the reactionary attitude of Ch'ien Tuan-sheng flourish in many places?), *Kuang-ming Jih-pao*, June 26, 1957, p. 3.

[50] *Hsin-hua Pan-yueh-k'an* No. 17, p. 175, and "'Fa-hsueh-chia' Ch'ien Tuan-sheng yuan-shih fan-tang yin-mou-chia" ("'Jurist' Ch'ien Tuan-sheng was originally an anti-Party conspirator"), *Kuang-ming Jih-pao*, July 21, 1957.

[51] "Ch'ien Tuan-sheng te fan-tung yen-hsing" ("The reactionary words and deeds of Ch'ien Tuan-sheng"), Peking, *Kung-jen Jih-pao* (*Daily Worker*), July 13, 1957.

[52] See particularly *Kuang-ming Jih-pao*, June 26 and July 21, 1957.

attacks on Ch'ien's reputation were factual and detailed. Ch'ien's background was divided into two parts for dissection: his reputation as a scholar and his contacts with Americans. At one of the mid-July forums, Ch'ien's academic past was discussed by Lecturer Ch'en Kuang-chung, College of Political Science and Law, and by Professors Jui Mu and Kung Hsiang-jui, both of Peita. They describe Ch'ien as a member, since 1924, of a scholastic clique led by Wang Shih-chieh, the well-known former Minister of Foreign Affairs (1945–1948). Ch'ien was accused of intellectual dishonesty in connection with his revision of Wang's book, *Comparative Constitutional Law*, and with Ch'ien's own book, *Min-kuo cheng-chih-shih*, which was written by a committee. Lastly, his critics accuse him of not being a scholar at all but a disappointed politician: "During the Resistance War, Ch'ien Tuan-sheng wanted very much to be an official, and Wang Shih-chieh recommended him as Vice-Minister of Education in the Kuomintang government and as Ambassador to Australia, but he could not secure the approval of Chiang Kai-shek." [53] The significance placed on this type of material by the Communists is not immediately clear. They may only be establishing Ch'ien's bourgeois background, or they may be settling a few old accounts; a revolution as extensive as that in China must inevitably raise questions about one's particular loyalty during the revolutionary period.

Ch'ien himself dealt with his contacts with the United States in his August 6 confession. In response to charges made against him of consorting with Americans, Ch'ien went back and re-examined all of his previous contacts with the United States. This produced a few interesting revelations, such as the fact that after the People's Liberation Army had entered Peking, O. Edmund Clubb, American Consul at Peking, transmitted an offer of employment to Ch'ien from Columbia University. Ch'ien refused, but the persistence of the Consul and of other Americans in trying to communicate with him seemed to imply the existence of a sinister plot in behalf of American imperialism. Ch'ien goes on to accuse Professor Fairbank of deliberately attempting to create "democratic individualists" in the ranks of Chinese intellectuals. Ch'ien concludes, "I had not realised before the liberation that these devils and monsters were engaged in espionage in China." [54]

The activities which were taken most seriously by the Party, however, were Ch'ien's efforts to strengthen the Democratic League, to guarantee his position in the College of Political Science and Law, and to enlarge his personal influence in general. These constitute the foundation upon which the other charges against Ch'ien were based. Ch'ien was implicated

[53] *Hsin-hua Pan-yueh-k'an*, No. 17, p. 176.
[54] "My Crimes," *Jen-min Jih-pao*, August 6, 1957; SCMP 1596, pp. 35–40.

not only as a member of the Chang-Lo clique, but also as the leader of a subgroup in Peking legal circles known as the "Ch'ien Tuan-sheng clique." The activities of the Chang-Lo clique, dating from approximately January 1, 1956, onwards, were extensively studied in the autumn of 1957 at criticism meetings sponsored by the Democratic League. At the last Democratic League criticism meeting, which took place on January 19, 1958, League Vice-Chairman Shih Liang presented a comprehensive report on what had been discovered concerning the Chang-Lo clique.[55] Shih Liang's report lists eight specific "crimes" attributed to the clique. This indictment constitutes a summary of Party objections to the activities of the intellectuals in this period, and provides a useful framework for discussing Ch'ien's involvement. The following is a shortened form of this list with additions showing the extent to which it applies to Ch'ien Tuan-sheng[56]:

(1) "... publicising bourgeois 'democracy and freedom', opposing the political system and basic policies of our state, opposing the socialist system..." As indicated above, there is no record of Ch'ien's having made an anti-Party or anti-socialist speech, although one article does link his name with that of Ch'u An-p'ing who made a speech criticising the "Party kingdom" (*tang t'ien-hsia*), "sectarianism in leading political and legal organs," etc.[57] The same article goes on to state, however, that "Ch'ien craftily maintained two fronts with regard to the Party: outwardly respectful and inwardly abusive."

(2) "... opposing the Communist Party's leadership in state affairs and first and foremost, its leadership of intellectuals and scientific, cultural and educational organisations..." In his confession, Ch'ien stated, "Since I was seriously discontented ... when the rectification campaign began, I openly proposed that the College of Political Science and Law should not need the leadership of a Party Committee, but should be led by some organisation such as a College Council to be headed by me."[58]

(3) "... opposing the Communist Party's leadership and supervision of the democratic parties and groups..." The Chang-Lo group sought to enlarge its influence in the government and, in furthering this goal, sought to enlarge the membership of the Democratic League among other things. At the June 21 and 25 forums, Professor Yü Chen-p'eng

[55] "Chang Po-chün—Lo Lung-chi Clique Smashed," NCNA, January 19, 1958; SCMP 1699, pp. 27–30. The Democratic League meeting was presided over by League Chairman Shen Chun-ju and was attended by some 200 persons. It was the occasion for the first public announcement that Chang Po-chün and Lo Lung-chi had confessed in writing to "criminal activities against the Communist Party."

[56] *Ibid.* p. 28.

[57] *Hsin-hua Pan-yueh-k'an*, No. 17, p. 175.

[58] "My Crimes," *Jen-min Jih-pao*, August 6, 1957.

of the College of Political Science and Law said that Ch'ien's three greatest "loves" were to see the Democratic League grow, to meet the Communist Party on equal terms, and to listen to grievances against the Party from League members.[59] Another article quotes Ch'ien's description of a dinner meeting on March 12, 1957, called by Chang Po-chün and attended by himself, Tseng Chao-lun, Wu Ching-chao, Fei Hsiao-t'ung and others. At this meeting Ch'ien applauded Chang's statement that the Democratic League was a political organisation and that it should play a greater part in national affairs than that of a mere discussion forum.[60] According to comments by Professor Hsu Tun-chang of the College of Political Science and Law at a mid-July forum, Ch'ien and Lo had convened meetings of old intellectuals immediately following Chou En-lai's January, 1956, talk. At these meetings, Lo had sought support for a political party of intellectuals which could meet the Communist Party on equal terms. Following Professor Hsu, Liu Yü-chung, a member of the Democratic League, said that in February, 1957, Ch'ien had convened another meeting to discuss why the enlargement of the Democratic League over the past several years had been so slow.[61]

(4) ". . . negating brilliant achievements of . . . *San Fan—Wu Fan* [Three-anti—Five-anti], ideological remoulding and the suppression of counter-revolutionary movements; inciting anti-Communist sentiment and attempting to turn the tables and reverse decisions in settled cases." Ch'ien's former student, Lou Pang-yen, wrote that Ch'ien Tuan-sheng "zealously opposed ideological reform of the intelligentsia."[62] An example of "inciting anti-Communist sentiment" which is mentioned in every article on Ch'ien and which Ch'ien himself called in his confession his "most outstanding act of sabotage" involves his replies to some letters written to him by another student, one Chang Wen-yueh. The student spoke approvingly of student fighters in the Hungarian revolution, and Ch'ien not only failed to rebuke him but encouraged him in opposing the Party.[63]

(5) ". . . publicising bourgeois democratic individualism and bourgeois science and culture among intellectuals . . ." The major activities of the so-called "Ch'ien Tuan-sheng clique" took place in this field. The clique consisted of Ch'ien; Lou Pang-yen, Deputy Director of the Peking Municipal Judicial Bureau; and Wang T'ieh-yai, professor of political science at Peita.[64] These three men were charged with a

[59] *Kuang-ming Jih-pao*, June 26, 1957.
[60] *Hsin-hua Pan-yueh-k'an*, No. 17, p. 175.
[61] *Ibid.* p. 174.
[62] *Kung-jen Jih-pao*, July 13, 1957.
[63] See particularly *Kuang-ming Jih-pao*, July 21, 1957.
[64] "Ch'ien Tuan-sheng and other Rightists of Jurist Clique Bared," NCNA, August 21, 1957; SCMP 1624, pp. 26–28. The Shanghai *Wen Hui Pao*, September 13, 1957, lists the names of 34 rightists belonging to legal circles in Peking. See "Shou-tu fa-lü-chieh i-p'i yu-p'ai fen-tzu" ("A Batch of Rightists of Capital Legal Circles"), Ch'ien and Wang T'ieh-yai head the list.

conspiracy to bring about a " second reorganisation of educational institutions "—specifically with trying to establish a " large law school " with Ch'ien as Dean, and a department of international relations at Peking University to be headed by Wang. Both of these enlarged organisations were to take over the courses in law and diplomacy then being taught at the college for cadres in Peking (People's University ; *Jenta*), and at various other institutions. Ch'ien's group also advocated dispensing with Party committees in the universities, and Wang T'ieh-yai proposed the reintroduction of the study of international law in his new department —a subject that had been suspended for seven years.[65]

(6) " . . . diverting the political direction of the *Kuang-ming Jih-pao*, the *Wen Hui Pao*, and other publications . . ." This does not apply to Ch'ien.

(7) " . . . propagandising the might of the aggressive imperialist camp. . . ." This also does not apply to Ch'ien.

(8) " . . . expanding the position of the rightists, giving posts to their own men so as to control the organisation and take over effective leadership of the Democratic League . . . [and other institutions]." Professor Hsu Tun-chang states that Ch'ien, in early 1956, had compiled a list of persons in political and legal circles who would support Lo Lung-chi's proposed political party of intellectuals.[66] In his own confession, Ch'ien notes that he had tried to place his former students—Lou Pang-yen and Chang Ch'i-t'ai of Futan University—on the staff of the Peking College of Political Science and Law.[67]

Following the publication of this document the Chang-Lo clique was officially disbanded. Then, on February 1, 1958, the Fifth Session of the First National People's Congress dropped a total of 54 rightist deputies, including Ch'ien, whose credentials had been withdrawn by their constituencies. A few days earlier, on January 26, Ch'ien had also been relieved of his post as a member of the Standing Committee of the Democratic League's Central Committee, and finally, on March 17, 1958, the CPPCC National Committee's Standing Committee moved to expel Ch'ien, Chang Po-chün, Lo Lung-chi and others from the National Committee of the CPPCC. The following month Ch'ien's name

[65] Kung Hsiang-jui, " Ch'ien Tuang-sheng hsiao-chi-t'uan te yin-mou ho ' ta-fa-hsüeh-yuan ' fang-an " (" The Ch'ien Tuan-sheng clique conspiracy and the ' Big Law School ' scheme "), *Hsin-hua Pan-yueh-k'an*, No. 19, 1957, pp. 60–61 [reprinted from *Jen-min Jih-pao*, August 11, 1957]. Kung is a Peita law professor and former student of Ch'ien. " Wang T'ieh-yai's Conspiracy to Reinstate Bourgeois Jurisprudence totally Crushed," *Jen-min Jih-pao*, September 17, 1957; SCMP 1636, pp. 9–10. With regard to Lou Pang-yen's involvement, see " Legal Circles Denouncing Rightists in Forum of July 23rd," NCNA, July 23, 1957 ; SCMP 1598, pp. 37–41.

[66] *Hsin-hua Pan-yueh-k'an*, No. 17, p. 174.

[67] " My Crimes," p. 37.

disappeared from the masthead of *China Reconstructs*, and he, himself, seemed to pass into oblivion.

Exactly one year later, however, on April 11, 1959, the namelist of the *Third* National Committee of the CPPCC was published. Representing the Democratic League were Lo Lung-chi, Chang Po-chün, Fei Hsiao-t'ung and 37 others! Ch'ien was not included in that group but was named as one of 308 "specially invited persons."[68] The next significant development in the once-again improving situation of the intellectuals was the amnesty granted in celebration of the 10th Anniversary of the People's Republic. The CCP Central Committee approved the following decision on September 17, 1959: "Anyone who has changed from evil to good and has shown that he has really changed in both views and activities will no longer be considered a bourgeois rightist from now on; that is, the label of 'rightist' shall be removed from him."[69] NCNA announced on December 4, 1959, that a group of 142 rightists had been relieved of the rightist label including several well-known intellectuals. Ch'ien was probably included in that group.

Ch'ien's activities between April 1958 and April 1959 are not known in detail. Presumably he undertook "political study"—that is, worked in a commune in order to rid himself of bourgeois ideology. One commentator described the most recent reform technique as follows:

> The basic remoulding of bourgeois elements, bourgeois intellectuals, and democratic groups is regularly carried out by putting them "in the boundless sea of working people," that is to say, in the places where they work, and is closely combined with practice and labour.[70]

In view of the number of criticism sessions, confessions, and published articles concerning Ch'ien and the Chang-Lo clique in late 1957, one would suppose that Ch'ien had received at least a long prison sentence. Actually, nothing happened which was equivalent to the charges made against him—charges which amounted to high treason. One must therefore take these charges with a grain of salt, even though in a few respects, such as the strengthening of the Democratic League, they are surely true. As indicated earlier, the elaborate accusations and sensational announcements of an intellectual conspiracy appear to have been a utilisation of the intellectuals as scapegoat, following the Party's realisation that the Hundred Flowers "thaw" was a mistake. This does not mean that there were no grievances between Ch'ien *et al.* and the Party. However, Ch'ien himself seems to have had a much better idea of what the Party had against him when he said in his confession:

[68] NCNA April 11, 1959; CB 557, p. 21.
[69] NCNA September 17, 1959; SCMP 2101, p. 1.
[70] Chang Chih-i in "The Situation of the Democratic Parties and Groups in Communist China," CB 547, January 27, 1959.

> I am an ambitious politician who has assumed the mantle of a "scholar." For a long time I have tried to gratify my political desires under the respectable guise of "professor," and with this end in view I have tried to exploit my position in the College in order to enhance my political status. . . . It is much more serious than I first thought, when I began to indulge in these activities. I am really a criminal to the Party and the people.[71]

Herein lies the kernel of the problem. Ch'ien and his associates are talented and trained men whose abilities have frequently been ignored by the Communist government. While not necessarily being "ambitious politicians," they have all desired a greater voice in government than that of figurehead or propagandist. Since they have been excluded because of non-Party status, they inevitably became disgruntled and sought support for internal revision of the situation. That the major impetus of this desire for reform is not counter-revolutionary is revealed by the impressive records of accommodation to the new order made by Ch'ien and others from 1952 to 1957. Ch'ien's downfall in 1957 came because the régime felt that it had no continuing need for his talents. In fact, he was of greater use to the state cult as a "rightist" than as a teacher. Yet it is hard to believe that any nation can afford to throw away talent or to stunt responsible political ambition with impunity. Here lies the major lesson to be derived from a study such as this: Ch'ien's career since 1949 is an illustration of the intellectual wastefulness forced on the present Chinese government by its adherence to Communist ideology.

[71] "My Crimes," p. 38.

The Intellectual and Public Life of Ma Yin-ch'u

By RONALD HSIA

AFTER the turbulence of the anti-rightist movement of 1957 which silenced those who held different views from the Communist Party line, Ma Yin-ch'u, then Dean of Peking University, refusing to yield to pressure, continued to express his "unorthodox" views and accepted a challenge to defend them against some two hundred critics. He stated in November 1959, "Although I am nearly eighty years old and outnumbered, I shall accept this challenge [to defend my position] and fight single-handed till I die. I shall not yield to those critics who resort to force rather than reason."[1] Professor Ma's integrity and courage in defending his beliefs command our respect and would justify the following biographical account even if he were not one of China's leading intellectuals.[2]

Ma Yin-ch'u was born in 1882 in Cheng *hsien*, Chekiang Province. He received his early education in his native town along traditional lines which gave him a firm grounding in the Chinese classics.[3] Subsequently he received modern education in the Sino-Western Academy in Shanghai and Pei-yang University in Tientsin. In 1907 he sailed for the United States to continue his undergraduate work at Yale, where he shifted his interest from mining and metallurgy to economics. Upon graduation from Yale, he took up postgraduate study at Columbia, from which he received his Ph.D. degree in 1914.

Returning to China in 1915, Ma Yin-ch'u began his teaching career at the National Peking University. This university had a reputation as the cradle of freedom of thought. Its liberal educational policy permitted Ch'en Tu-hsiu and Li Ta-chao, noted Marxists, to be on its faculty. Ma's association with Ch'en and Li in this period undoubtedly influenced his thinking. In fact, Ma was one of the founders of the China Society

[1] Ma Yin-ch'u, "*Wo-ti che-hsueh ssu-hsiang ho ching-chi li-lun*" (*My Philosophy and Economic Theory*), *Hsin Chien-she* (*New Construction*), No. 11, 1959. According to the Chinese system of age calculation, Ma was seventy-nine years old when he wrote this article.

[2] This biographical account has been undertaken at the request of the Editor of *The China Quarterly*. In accepting his kind invitation, I must emphasise that biographical writing is beyond the field of my competence.

[3] This background is reflected in an inclination in his recent writings to touch on Chinese philosophy, particularly the thoughts of Sung and Ming scholars.

for the study of Marxism. His interest in Marxism, however, was primarily academic. His study led him to the conclusion that Marxism could not be applied to China due to the lack of the following essential conditions: concentration of capital, development of productive capacity, training in teamwork-production, and class distinction between labourers and capitalists.[4] This explains his withdrawal from the Society in 1921 when it became the nucleus for the Chinese Communist Party.

Ma Yin-ch'u is a firm believer in " learning for the sake of application." In this belief, perhaps, lies the key to his pursuing the study of applied economics rather than pure theory. He specialised in such subjects as public finance, money and banking, foreign exchange, etc. The topic of his doctoral dissertation (" The Finances of the City of New York ") may have been chosen with a view to its possible usefulness in reorganising China's municipal finances. But upon his return to China, he found to his disappointment that the type of applied economics he had learned abroad was not applicable to China. He determined therefore to look into economic realities in China. In pursuance of this task, he took a year's leave from the National Peking University during 1920–21 to investigate Shanghai's financial and trading operations.[5] From his major publications which appeared in the 1920s, one can readily see that his efforts during this period were concentrated on the discussion of the problems of, and the presentation of data on, the Chinese economy, particularly in the fields of banking, foreign exchange and tariffs.[6]

In addition, Ma was working towards promoting studies on the Chinese economy. He emphasised that " . . . those who devote themselves to the study of economics should pay a good deal of attention to China's actual conditions, social environment and historical background. [Since] we live in this society," he concluded, " [we] can by no means isolate ourselves from reality and indulge in abstract discussions." [7] He was largely responsible for the formation, in 1923, of the Chinese Economic Association (CEA), with another noted Chinese economist, D. K. Lieu, as its co-sponsor. The preponderant emphasis placed by the CEA on the promotion of research on China's economic problems was

[4] *Ma Yin-ch'u yen-chiang chi* (*A collection of lectures by Ma Yin-ch'u*) (Shanghai: 1928), Vol. IV, p. 138. (An earlier edition was published in Peking, 1926.)

[5] While in Shanghai, Ma assisted Kuo Ping-wen, President of Southeastern University, in establishing the Shanghai College of Commerce as a part of the University. He also gave a course in economics at the new College.

[6] His major publications in the 1920s included the following: *Chung-kuo kuo-wai hui-tui* (*China's Foreign Exchange*) (Shanghai: 1925); *Chung-kuo kuan-sui wen-t'i* (*China's Tariff Problem*) (Shanghai: 1926); *Chung-hua yin-hang lun* (*Discussions on Chinese Banking*) (Shanghai: 1929). In addition, he published between 1923 and 1928 four volumes of *Ma Yin-ch'u yen-chiang chi*).

[7] Ma Yin-ch'u, *Ts'ai-cheng hsueh yü chung-kuo ts'ai-cheng li-lun yü hsien-shih* (*Public Finance and Public Finance in China: Theory and Reality*) (Shanghai: 1948) Vol. 1, p. 2.

reflected in its publication policy,[8] which in turn aroused considerable interest among the students of economics in China.

Ma Yin-ch'u has an intense desire to serve his country and his people. This strong patriotism in him has conditioned his *weltanschauung*. As will be shown later, it also drives him to follow certain courses of action to his detriment. Ma's social philosophy is that of a universalist, believing that society is not merely an agglomeration of absolutely independent individuals; it is a real entity and a necessary precondition of the life of the individuals. This belief presumably stems from his conviction that in universalism lies an effective cure for the extreme individualistic tendencies prevailing in China. With such a social outlook, Ma did not need to make any fundamental or intellectual compromises to work for either the Nationalist or the Communist régime, *as long as the government served the interests of the state and the people.* After all, socialism is a hybrid form of universalism,[9] and the Nationalists showed tendencies towards the organic conception of the state, a variety of universalism.

Ma's strong patriotism also made him feel disinclined to confine himself to teaching and research. He had an urge to take an active part in the formulation of policies which would have a direct bearing on the material welfare of the people as a whole. This urge drove him to take up government jobs. In 1927 he left the National Peking University to join the Chekiang government as a member of the provincial council in charge of policy matters concerning the finances of the province. In the following year, he became a member of the Legislative Yuan of the central government in charge of financial legislation.[10] In the latter capacity, he played an important role in the drafting of the country's banking law.

The same urge which led him to participate in government work took expression also in his writings, which became increasingly concerned with the economic policies of the government. He showed deep concern over China's silver standard.[11] Immediately after the monetary reform became effective in November 1935 placing China on a foreign exchange standard, he brought out his *Chung-kuo chih hsin chin-jung cheng-ts'e* (*China's new financial policy*) (Shanghai: 1936). This was a most

8 The early publications of the Chinese Economic Association included *Chung-kuo Ching-chi Wen-t'i* (*China's Economic Problems*), *Ching-chi Chien-she* (*Economic Construction*), and *Kuan-sui wen-t'i chuan-k'an* (*Special Issue on Tariff Problems*).

9 Othman Spann, *Types of Economic Theory* (London: 1929), pp. 211–212.

10 In this period, Ma taught at the National Chekiang University, the National Chiaotung University and the National Central University. He was Dean of the Central University's College of Commerce, which was located in Shanghai.

11 *Chung-kuo ching-chi kai-tsao* (*The Economic Reform of China*) (Shanghai: 1935), pp. 520–524.

comprehensive account of this epoch-making event in the economic history of Nationalist China.

Prior to 1939, Ma got along admirably with the Nationalist régime, which was seriously engaged in modernising the economy and promoting the general welfare of the people. Twice Ma was invited by Chiang Kai-shek to Lushan, Kiangsi province, to participate in informal, confidential discussions among prominent university professors and high-ranking government officials on the economic aspects of a possible war of resistance against the Japanese invasion. It was during the second Lushan conference that the government disclosed its determination to go to war. Thus Ma was in Lushan when the Sino-Japanese War broke out. He followed the government first to Hankow and subsequently to Chungking. While in Chungking, his formal connection with the government was limited to being a member of the Legislative Yuan, although he was commissioned by the Political Section of the Military Council to write a textbook on economics [12] for military academies. In the meantime, he held a chair in economics at the National Chungking University and served as Dean of its School of Commerce.

As the war continued, economic conditions in free China deteriorated, and it became increasingly difficult to maintain economic stability.[13] Hence more and more government controls over production, distribution and prices were imposed; and consequently there were more and more temptations for corruption and profiteering. With bureaucratic capital in those industries and distribution channels which were under government control, wartime profiteering and government corruption became widespread in unoccupied China. This infuriated the patriotic Ma Yin-ch'u. In his view, the government was no longer serving the interests of the country and the people. He therefore began openly to attack the Nationalist régime. He gave a number of public speeches prior to the winter of 1940, in which he first attacked H. H. Kung, then Minister of Finance, for corruption and mismanagement of public finance. Subsequently T. V. Sung and Chiang Kai-shek also became the targets of his attack. He named Chiang Kai-shek a dictator and a "hero of the clan." He blamed Chiang for tolerating the misconduct and corruption of his close relatives and for being blind to the maltreatment of soldiers, educational and cultural workers, and civil service employees—those who were genuinely contributing to the war effort. In addition to those public

[12] This textbook written on the basis of his lectures delivered at the Shanghai College of Commerce (see note 5, *supra*), was published by the Commercial Press in Chungking early in 1943 under the title *Ching-chi hsueh kai-lun* (*Introduction to Economics*).

[13] The shortage in the supply of commodities was real, resulting from the loss of territories, destruction by military operations, the disruption of transport, etc. This shortage was accentuated by the increase in the size and the concentration of population due chiefly to the influx of people from the coastal areas. Above all, high-priority military needs were competing for the dwindling resources.

speeches denouncing Kung, Sung and Chiang, he wrote equally critical articles which appeared in two popular magazines, *Chung-shan yueh-kan* (*Sun Yat-sen Monthly*) and *San-min chu-i pan-yueh-kan* (*The Three People's Principles Semi-Monthly*). All these culminated in his arrest in 1940.[14]

During the twenty odd months when Ma was under "house arrest" in Hsifeng, Kweichow Province, he was unable to carry on any research on the economic realities of China. As an alternative, he worked on a volume on economic thought. This manuscript was unfortunately never published.

Although after his release,[15] he was banned from teaching in government universities, giving public lectures, publishing non-textbook writings and conducting press interviews, his prestige was immensely enhanced. Students idealised him as a patriotic scholar while others respected him for his courage. In spite of this government ruling, Ma managed to express his views on economic matters and government policies at the "Friday dinner gatherings" of prominent bankers, industrialists and businessmen in the wartime capital. He remained highly critical of the economic policies of the government. His advocacy of the nationalisation of gold aroused considerable discussion particularly among business circles.

After the war, in 1946, Ma returned to the Nanking-Shanghai-Hangchow area. At that time the government ban on his teaching in national universities remained enforced so that he had to reconcile himself to teaching in two private commercial colleges in Shanghai.[16] This unhappy situation may have driven him to a closer alignment with the Communists. In the postwar period, he was seeing Chou En-lai fairly frequently and a friendship developed between them. In addition he was one of the leading spirits in the anti-government discussions held in student and labour groups in Shanghai. His continued association with business circles made available to him the channel of their "Friday dinner gatherings" in Shanghai. Thus he continued to criticise government economic measures, particularly the issuance of the gold yüan notes which, in Ma's view, were doomed to failure.

[14] One day in the winter of 1940, Tai Li (the secret police chief) called on Ma Yin-ch'u at his residence to extend a request on behalf of the government that Ma make a field trip to investigate the economic conditions in Third War Zone. Ma was taken first to Nanchang, where he was the house guest of Ku Chu-t'ung, Commander-in-Chief of the Third War Zone. From there he was transferred to Hsifeng, Kweichow Province, to be confined to a "camp" where Chiang Hsueh-liang was also detained.

[15] Wendell Willkie is known to have been instrumental in Ma's release. While in China in 1942 on a special mission for President Roosevelt, Willkie requested to see his friend Ma Yin-ch'u. In the meantime, he pleaded with Chiang Kai-shek for Ma's release on the ground of democratic principles.

[16] The Chung Hua Industrial and Commercial College, and the Li Hsin Accounting School.

In 1948 when the economy was disintegrating, a wave of anti-hunger demonstrations by students, workers and intellectuals swept the big cities. Ma Yin-ch'u at the age of sixty-six took part in such demonstrations in both Hangchow and Shanghai. This participation was significant in that it marked a departure from his previous practice of voicing his disapproval of government personalities and policies *individually* through writings and speeches. This time, however, he expressed his anti-Nationalist feelings by aligning himself with left-wing elements in a nation-wide violent anti-government movement. Shortly afterwards, he fled to Hong Kong to avoid possible arrest by the Nationalist government.

At this point, Ma Yin-ch'u was, perhaps, not yet reconciled to Communist doctrines in their application to China. As late as 1947, he was still saying: " China has not passed the phase of capitalism; moreover, [capitalism] has not really got started [in China]. The various difficulties and dangers confronting our economy have not been due to too rapid a development of capitalism. Rather, they are attributable to the tardiness and slowness in the development of capitalism. In England and America where capitalism has developed to its full potentialities and where monopolistic capital has gained prominence, criticisms on capitalism may be warranted. But it is ridiculous and exceedingly harmful to transplant [such criticisms] to the Chinese scene." [17]

How, then, does one account for Ma's acceptance of Chou En-lai's invitation and his return from Hong Kong to the Chinese mainland early in 1949 to collaborate with the Communist régime? Ma Yin-ch'u could not have been so naïve as to believe that the avowed intention of the Communists to form a coalition government amounted to much more than a gesture for publicity purposes. It must have occurred to him that from the standpoint of propaganda he would be valuable to the Communist régime. But he did not seem to mind this if he could, in the process of being used, gain a voice in shaping the new government's policy towards making China a modern industrial nation. Thus his intense patriotism swept him into an apparently compromising course of action. Another plausible explanation for Ma's collaboration with the Communists is that the economic policy of " new democracy " advocated by Mao Tse-tung at that time was a mild one, and came very close to Ma's own ideas about economic reforms in China. Ma wanted a constrained capitalism. He favoured government operation of the nation's heavy industry with the light industrial sector left to private enterprise. He believed in doing away with bureaucratic capitalists and feudal landlords. He was highly critical of the harsh, drastic measures of the

[17] *Ching-chi hsueh k'ai-lun* (*Introduction to Economics*) (Shanghai: 1947) (rev. ed.), p. 3.

Communists during the Kiangsi Soviet period.[18] But that harshness and radicalism to which Ma objected were replaced by moderation in Mao's "new democratic" system, which was to foster the development of individualism within the framework of community life, and the development of capitalism along lines beneficial to the people's livelihood. It was also the responsibility of the "new democratic" state to protect all legitimate private property; only the land of the feudal class and the monopolistic capital of the Nationalists were to be confiscated.[19] Thus, as a result of Mao's apparent retreat, he and Ma in the late 1940s were thinking practically along the same lines regarding economic policy.

Ma Yin-ch'u's usefulness to the Communist régime was reflected in the multiplicity of government, semi-official and educational posts which he held, and the numerous occasions on which he was sent abroad to represent Communist China.[20] Soon after Ma's arrival on the mainland, he was made deputy-leader of Communist China's delegation to the First World Peace Congress originally to be held in Paris but actually convened in Prague in April 1949. Concomitantly he was invited to take part in the preparation for the forthcoming Chinese People's Political Consultative Conference, which on September 29, 1949, adopted the "Common Programme" outlining the general economic policy of the new régime. Upon the inauguration of the Central People's Government (CPG) in

18 Ma Yin-ch'u, *Chung-kuo ching-chi kai-tsao*, *op. cit.*, pp. 191–199; *Ching-chi-hsueh kai-lun*, *op. cit.*, p. 3; *Yen-chiang-chi*, Vol. IV, p. 138.

19 See Mao Tse-tung's report, "On Coalition Government," to the Seventh Congress of the Chinese Communist Party (CCP) on April 24, 1945, translated in *Selected Works of Mao Tse-tung* (London: Lawrence and Wishart, 1956), IV, p. 244 *et seq.*; and his report to the Central Committee of the CCP on December 25, 1947. See *Mao Tse-tung Hsuan-chi* (*Mao Tse-tung's Selected Works*) (Peking: Jen-min Ch'u-pan-she, 1960), IV, p. 1243 *et seq.*

20 His more important posts during 1949–59 included the following: member of the Central People's Government Council; Vice-chairman of the Committee on Financial and Economic Affairs of the Government Administration Council; Vice-chairman of the East China Administrative Committee; Member of the China Committee for the Promotion of International Trade and subsequently also of its Arbitration Committee for Foreign Trade; member of the Standing Committee of the First and Second National Committees of the Chinese People's Political Consultative Conference; member of the Standing Committee of the First and Second National People's Congresses; member of the Committee for Drafting the Constitution; member of the Central Election Committee; member of the Executive Board and subsequently Vice-Chairman of the Sino-Soviet Friendship Association; Vice-Chairman of the China Peace Committee; member of the Executive Board of the World Peace Congress; member of the Board of Directors of the Chinese People's Association for Cultural Relations with Foreign Countries; member of the Standing Committee of the Board of Directors of the Bank of China; President of Chekiang University; President of Peking University; and Member of the Department of Philosophy and Social Sciences of the Academy of Sciences.

In addition, during 1949–54 he was sent to Prague, Warsaw, Vienna, Berlin and Stockholm as a member of Communist China's delegation to the various sessions of the World Peace Congress, to the Congress of Peoples for Peace and to the International Conference on the Relaxation of World Tensions.

October 1949, Ma became member of the CPG Council and Vice-Chairman of the Committee of Financial and Economic Affairs of the Government Administration Council. The latter post enabled him to share in the formulation and implementation of the new régime's economic programmes and policies in this early phase. Similarly, as Vice-Chairman of the East China Military and Political Council (subsequently reorganised into the East China Administrative Committee), Ma had a voice in the shaping of economic policies concerning this important economic region till 1954 when all regional administrative organs were abolished.

To maintain his usefulness to the Communist régime, Ma Yin-ch'u felt the need to equip himself with a tool, with which to understand better Communism in theory and in practice. Thus in 1951 he made a personal ten-year plan with the first four years devoted to the study of the Russian language and the remaining years to research and writing. Significantly, during this plan period Ma reversed his former judgment that overall planning of the Soviet type was not applicable to the Chinese economy.[21] His ambitious attempt to carry out a personal long-range plan at the advanced age of sixty-nine is, indeed, admirable. But, by underestimating the speed with which Communism marched in China, he was not intellectually flexible enough to cope with the drastic changes in Communist economic tactics.

In April 1955 he completed a paper on *Wo-kuo tzu-pen chu-i kung-yeh ti she-hui chu-i kai-tsao* (*The socialist transformation of private industry in China*). This paper was circulated in government circles. While Ch'en Yun considered its contents to be in accordance with reality, others thought the mild tone and many points contained in the paper showed partiality towards private capitalists. Comments of the latter type prevented an immediate publication of this paper.[22] Within three months, however, Mao Tse-tung in his speech before the Conference of the CCP Secretaries launched a campaign for speeding up the socialisation of private enterprises. This shift to radicalism by Mao marked a departure from his previous stand, to which Ma Yin-ch'u was still clinging.

Meanwhile, based on the findings of a Chekiang field trip, Ma wrote a lecture on the population problem embodying his "new population theory," a lecture he was to deliver before the Second Session of the First National People's Congress to be held in July 1955. But in a small group discussion of this lecture before its formal presentation, Ma was criticised for his Malthusian viewpoint and was advised to withdraw this lecture.

[21] Ma Yin-ch'u, *Chung-kuo ching-chi kai-tsao, op cit.*, Vol. I, p. 199.

[22] A revised version of this paper was published in *Jen-wen k'o-hsueh* (*Humanity*: the Peking University Journal) No. 3, 1957.

This incident further indicates that Ma was unable to keep pace with the current of the Communist movement in China.

Then came the renowned "Let a hundred flowers bloom, let a hundred schools contend" campaign, which afforded Ma Yin-ch'u a welcome opportunity of publishing his "new population theory" and of formulating his ideas regarding planning and economic development.

His "new population theory" explains the need for birth control from the viewpoint of economic development. It shows with Chinese data how the accumulation of capital, the rise in labour productivity and the betterment of living conditions are hampered in an over-populated economy with a high rate of population growth. This theory is not exactly new, as Western economists have long since presented similar arguments in support of birth control. However, the facts contained in Ma's paper are of value. This paper was presented at the Third Session of the First National People's Congress in July 1957.[23]

In the meantime, Ma was engaged in a major research project on the theoretical aspects of planned economic development. He applied a "circular progression" approach to economic changes in China in order to show the need for overall balance in the development process. During the period from May 1956 to February 1958, Ma published two essays on "The Theory of Overall Balance and the Law of Proportional Development in the Light of Actual Conditions in China" and one volume called *My Economic Theory, Philosophy, and Political Stand*.[24] In these writings, he selected certain "links" which, in his judgment, were important in a planned economy.[25] Then he proceeded to illustrate with Chinese examples how changes in one "link" tended to affect the state of equilibrium in another "link." Such an interaction, according to Ma Yin-ch'u, arose from an innate relationship which was governed by the "law of nature." This innate relationship between "links" required an overall balance, and only through a proportional development of the various "links" could the overall balance be maintained. The absence of an automatic mechanism for ensuring a proportional development of the various "links" pointed to the need for economic planning to achieve and maintain the overall balance.

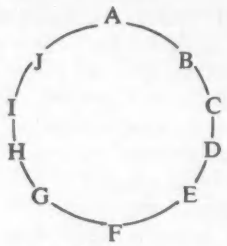
Ma tried to argue further that the development of a socialist economy

[23] The text of this report appeared in the *People's Daily* (*Jen-min Jih-pao*), July 5, 1957.

[24] "Lien-hsi chung-kuo shih-chi lai t'an-t'an tsung-ho p'ing-heng li-lun ho an pi-li fa-chan kui-lü," *People's Daily*, December 28 and 29, 1956.
"Lien-hsi chung-kuo shih-chi lai tsai t'an-t'an tsung-ho p'ing-heng li-lun ho an pi-li fa-chan kui-lü," *ibid.*, May 11 and 12, 1957.
Wo-ti ching-chi li-lun che-hsueh ssu-hsiang ho cheng-chih li-ch'ang (Peking: 1958).

[25] What Ma considers to be most important are not necessarily the most important "links" in a planned economy. He has, for instance, over-emphasised the role of prices in a planned economy.

proceeded not only in accordance with the law of proportional development, but moved in a circular pattern as follows:



In Ma's own diagram reproduced above, the points A, B, C, . . . each represent an important "economic link." Thus A affects B, B affects C, all the way round to J. When J affects A, the first circular chain of effects becomes complete, and another chain ensues on a higher level, so that the circular movement can be winding upwards to allow for growth.

This, in a nutshell, is Ma's "theory of circular progression." As long as the circular movement is consistently in the same direction, as shown in Ma's diagram, it is possible to continue to wind upwards. However, in his subsequent essay entitled "Further Discussions on the Circular Progression in My Theory of Balance," [26] Ma points out that the innate relationship between the various "links" is not limited to one direction. It can move in the opposite direction, such as from A to J to I and so on. Ma further argues that the movement can go back and forth and that the same innate relationship exists between, say, B and F, between which interaction also takes place. Thus, by making the direction of movement indeterminate, Ma in effect destroys his own theoretical scheme.

Between April 1958 and November 1959, this theory together with Ma's new population theory was attacked by some two hundred critics from the academic and literary circles. Although most of the attacks were politically motivated, some criticisms were legitimate.[27] His theory cannot be construed as a dynamic development model; nor does it add much to the economics of planning. His analysis by way of circular and spinal movement is somewhat awkward. One must remember Ma Yin-ch'u is an applied economist and not a theoretician in the generally accepted sense. In examining Ma's work on theory, it is important to bear in mind his classification of economic theory into pure and empirical.

[26] "Tsai t'an wo-ti p'ing-heng-lun chung ti t'uan-t'uan-chuan li-lun," *Kuang-ming Jih-pao*, May 9, 1958.

[27] See, for instance, the criticisms made by Han Chia-ch'en. *Kuang-ming Jih-pao*, April 19, 1958.

In his writings, theory normally means empirical theory, which represents a systematic presentation of processed economic data. With this classification, one can, perhaps, better appreciate Ma's contribution, which lies strictly in the use of Chinese data to illustrate the essence of the economics of planning. This was precisely the task he had originally set for himself when he began to develop his "theory of circular progression."

The fervour with which Ma's development theory together with its inference on the need for birth control was attacked should be viewed against the background of the anti-rightist movement, which was launched in mid-1957. In the light of this background, Ma Yin-ch'u, in spite of his unyielding stand against the Party line, has been more leniently treated than those who have been branded outright as rightists. The régime's leniency towards Ma is also revealed in his election to the Standing Committee of the Second National People's Congress in April 1959 and his being allowed to remain as President of Peking University until April 1960. In view of Mao Tse-tung's adoption of Ma's "eight-point charter for agriculture" and the latest conspicuous emphasis on agricultural development, could it be that Ma Yin-ch'u has not completely outlived his usefulness to the Communist régime?

RECENT DEVELOPMENTS

Communist China's Agricultural Calamities

By W. K.

COMMUNIST China is entering yet another year of calamities of major proportions. They stem chiefly from its unbalanced farming industry and affect every sector of its economy.

Chinese and Western analysts have come full circle in their assessment within the last three years. In China the exuberance of the Great Leap Forward has given way to the gloom of austerity programmes and emergency regulations. Abroad, the voices praising the miracles of 1958 have been displaced by those reporting disaster and starvation. Those advising caution and moderation in the face of obvious Chinese exaggerations tend to be dismissed now as they were then.

Yet, any assessment of the magnitude of the dramatic changes in economic development and social engineering which are taking place in China today depends on the degree of accuracy with which the fluctuations that occur in farm production and food consumption are measured. In a country where four out of every five inhabitants are villagers and where, for many years to come, three out of every four will continue to be engaged in the production of the nation's food, everything depends ultimately on this largest sector of the national economy.

It is not by accident that there exists a direct correlation between the rate of economic growth, industrial output, capital investment, budget revenue and trade turnover on the one side and the harvest of the previous year on the other. Food provides half the country's retail sales and two-thirds of rural consumption; agricultural raw materials supply one-third of the industrial gross output and four-fifths of the produce of the consumer goods industries; and foodstuffs and other goods processed from farm products contribute nearly two-thirds of the earnings of foreign exchange.

No excuse is thus needed for insisting that efforts should be concentrated on assessing farm output, its utilisation and its susceptibilities to natural and institutional changes rather than the output of, say, steel in backyards, important though this may be in a process of thought formation the like of which the world has hardly experienced since the days of

the counter-reformation and inquisition. Assessments of this kind are not easy to put into effect. It is one of the marks of backwardness of a country that its statistical services are underdeveloped, its statisticians are susceptible to persuasion and its statistics are wide open to question. If, added to this, official exaggeration becomes part of a process of public education, the dangers inherent in basing impartial analysis on partial documentation become obvious. Yet, as one is permitted to eliminate from official statistics of steel output the impure iron produced in backyards by cultivators or journalists off duty, so one ought to be able to apply experience and common sense when faced with extreme claims of success or failure in the agricultural sphere.

It must not be assumed that this is an exercise that can be practised with impunity by the uninitiated. The vacillations of Chinese farm policy have been so momentous in the last three years as apparently to call in question all that has ever been known of the country and its people. The efforts of the first Five-Year Plan were followed by a short phase of relaxation which became widely known as the period of the Hundred Flowers. The criticism which it bred in all walks of life became so dangerous that it was brought to an abrupt end; too many weeds had grown to be tolerated. Renewed effort and emulation coincided with natural conditions which by all accounts yielded an all-time record crop.

Experienced farmers will confirm that even under less unstable conditions than those prevailing in China today, cultivators can easily be deceived by an exceptionally favourable crop. How much more must such deception be possible in a country where Party cadres urged constant vigilance and increased effort on all. It is worth recalling in this connection the defeat of the individualists in the statistical controversy between "rightists" and "leftists," *i.e.*, between those adhering to conventional methods of recording and reporting and those open to Party political guidance and persuasion which had been raging ever since the relaxed atmosphere of the Hundred Flowers had brought the conflict between the two concepts into the open.

Conversely an exceptionally poor crop, following a bumper harvest, may well fool crop reporters more experienced than those selected and trained by Communist cadres. The shock of failure must have been very much greater in a country where the populace had been conditioned to accept that the new Son of Heaven could master nature, double the nation's crop within one year and increase it further by one half in the following year.

The magnitude of the exaggeration that was officially permitted, if not manufactured, is on the record. As it has not served as a warning in the face of renewed exaggeration, in the opposite direction, it may be recalled briefly as a reminder of the grossness of the untruth to which

Chinese and non-Chinese were treated in 1958. Following a harvest of 185 million tons of grains (which in Chinese definition include pulses and the grain equivalent of potatoes, but no longer soya beans), the harvest forecast released in February 1958 was 196 million tons.

Thereafter not only was the weather exceptionally favourable, but superhuman efforts were made in the name of the Great Leap Forward to maximise production and supply. By the end of 1957 all cultivators had been organised, ten years ahead of the original schedule, into nearly 700,000 collective farms. Four months later the first communes were founded. Without allowing for the consolidation of the collectives, by harvest-time 1958 they had been merged into some 26,000 communes. In August the grain production was predicted to be going to reach 300–350 million tons and in December the claim was raised to 375 million tons or twice as much as in 1957. While a harvest of truly stupendous proportions was reportedly gathered, a programme of social and economic engineering was carried out in the communes which must have affected the life of every Chinese family even if dormitories still lay ahead.

Disregarding the dislocations which the introduction of the communes was bound to cause, Western observers fascinated by the magnitude of the harvest claim were only too ready to accept it uncritically. "Nothing convinces more than success," wrote Dr. Biehl of the Institute of World Economics of Kiel University who had travelled extensively in China. "The burden which the Chinese cultivator had to accept in accordance with the Party's doctrine was immense. Now the results are there for everyone to see. Any resistance that may have existed among the rural population is thus likely to have lost its ground." [1] Even in 1959 when signs had become plentiful that all was not well in China's food economy, Dr. de Castro, once closely connected with the Food and Agriculture Organisation of the United Nations wrote that "New China's victory over the eternal plague of hunger is as startling an event as the conquest of interplanetary space." [2]

Western statements of this kind are inexcusable even if the ultimate responsibility for the exaggerations rests with the Chinese Government and Party. It is sometimes reasoned that they were misled by enthusiastic statisticians reporting yields that did not exist.[3] This is hardly likely in view of the evidence available. Though limited and at times conflicting, it suggests that the exaggeration formed part and parcel of the

[1] Dr. M. Biehl, China in "World Economy," Half Yearly Report of the Institute of World Economy, Kiel, December 1958.

[2] As quoted by Reed J. Irvine in "Phantom Food in Communist China," *Asian Survey*, Vol. I, No. 1, Berkeley, California, March 1961.

[3] Non-food crops and livestock numbers were similarly affected by statistical exaggerations.

Communist Party programme of moulding the countryside, in a matter of a few months, into a society ready to accept burdens unheard of, in the expectation of returns that were to show results almost immediately.

We may never know for certain whether the setbacks of 1959 were partly caused by a disillusioned peasantry. The fact remains that the claim that grain output had doubled in 1958 was withdrawn in August 1959. The harvest estimate was scaled down from 375 to 250 million tons, but in the course of the adjustment statements were made which were hardly any more credible than the ones withdrawn. Allegedly the amendment was the result of two recounts carried out in the spring of 1959 when doubts were raised by some of those who had been among the "rightists" on earlier occasions. As nearly two-fifths of the crop must have been dispersed at that time, there is no reason to accept the revised estimate any more than the original one. As the weather had been quite exceptionally favourable throughout 1958 in all parts of China, a harvest of 220 million tons or nearly 20 per cent. above that of 1957 can be accepted as probable; but as the dislocations caused by the creation of the communes are likely to have been on a vast scale, the waste, like the harvest, can be assumed to have reached an all-time record.

New exaggerations were allowed to blur the harvest estimate of 1959. Although the weather was less favourable than in the previous year and almost one-third of the sown area had suffered from drought or floods (against one-sixth in 1958), the harvest was said to be 10 per cent. larger than the all-time record of 1958. Allowing for the hazards of nature, a grain crop of 200 million tons was probably the most that was gathered, though it may well have been a little less. Consumption was kept stringent. Shortages were reported from both towns and rural areas where cultivators were engaged in much heavy work outside the farms.

The year 1960 brought further deterioration in farm output and food production. The grain target was set, once again, 10 per cent. above the harvest claimed for the previous year. In the event, no results were published, but the sombre official pronouncements left no doubt as to the seriousness of the situation. This was supposed to be the worst year in a century. Drought affected almost every province of China proper, worst of all Hopei, Honan, Shantung and Shansi. Floods and typhoons hit twenty provinces, in particular the coastal areas of Kwangtung, Fukien, Kiangsu and Shantung, and also some parts of Manchuria. In all some 60 million hectares of land were said to have suffered. Against this, the acreage under grain crops was increased by 11 million hectares or over 10 per cent. and it was thus as large as in 1958 before the bumper crop had led to untimely reductions in acreages.

Whereas the harvest was seriously affected by natural hazards, there is some ground for doubt as to its extent. Nothing was said earlier in the season to suggest disasters of such magnitude as were in fact reported in the Chinese press. The summer crops were said to have yielded, according to plan, 10 per cent. more than in 1959. The possibility can thus not be ruled out that exaggeration blurs once again the true situation. After two unquestionably poor crops, Government and Party may have seen no other way to stimulate to renewed effort a population, increased by over 40 millions in three years, overworked in heavy capital projects, and disillusioned with the way land distributed by reform had reverted to the state and individual farming had deteriorated into communal life.

Western observers, on the basis of accounts given by refugees from Kwangtung and Fukien, have been quick to report conditions of starvation on a nationwide scale. They have taken China's contracts for large-scale shipments of Canadian and Australian wheat, barley and flour as supporting their contention; but in fact, the evidence available, though limited, does not wholly bear out their pessimism. The only statement as to the size of the 1960 harvest is attributed to Chou En-lai. When interviewed by Edgar Snow, Chou is said to have described the harvest of 1960 as less than those of 1958 and 1959, but more than in 1957.[4] This would point to something of the order of 190 million tons, a crop which, if evenly distributed, should be sufficient to feed a population of some 650 million people.[5]

Against this, there are the refugee reports which quote lack of essentials and rations substantially lower than in previous years. Rations, though varying according to locality and not always honoured, are a useful check on reports from official sources. Introduced informally at the end of 1953, rationing was regularised in the autumn of 1955 and has been in force, in one form or another, ever since. At the height of communal feeding food allocations were made to communes rather than families, but in essence rationing according to age and form of occupation has remained in force.

In 1959 monthly rations of grains were said to provide 40–60 lbs. for working men, with white-collar workers drawing approximately 30 lbs. In 1960, reports reaching Hong Kong and referring mostly to conditions in Kwangtung quoted rations of 40 lbs. for heavy and 25 lbs. for light workers. Later in the year they were apparently reduced further. Cases of malnutrition, *e.g.*, peripheral oedema, beri beri, night blindness and inflammatory disorders of the liver have been reported from various parts

[4] Edgar Snow, A Report from Red China. *Look*, January 31, 1961.

[5] As given by Ho Wio-Yang and Ch'un-Lsü in "distribution and exchange of China's agricultural products," Kuang-ming Jih-Tsao, February 27, 1961. See Survey of China Mainland Press (Hong Kong: U.S. Consulate-General), No. 2515. Figures as high as 700 million are sometimes quoted, but these seem unduly inflated.

of China. These reports naturally leave out of account non-rationed foodstuffs; nor do they say anything in quantitative terms of supplies in the villages or the frequency of malnutrition. There is no telling whether the rural population live better or worse than the town dwellers. The usual assumption that villagers suffer most in a year of scarcities is not supported by the evidence available in Asia and Europe during the Second World War. Also in 1956 food consumption in Chinese urban and country areas was known to be of identical calorie content, though more varied in towns than in villages.

The diet of the Chinese is of course such that any departure from normal standards is likely to cause hardships. Grains, pulses and potatoes provide almost nine-tenths of the calorie intake, and the diet is thus deficient even in normal circumstances in sugar, vegetable fats and protective foods, and in particular in animal proteins and vitamins. Before the calamities of the last year made themselves felt the diet provided approximately 2,000 calories which was 10 per cent. less than in the years before the Japanese invasion nearly a generation ago. In 1958 that level of consumption was reached again for the first time. Even so, bearing in mind the climatic conditions, body-weights and age composition of the population, the Chinese diet of the last few years has hardly been worse than that of many countries in Asia and possibly better than in some of them.

The situation has been far from satisfactory since the harvest of 1960. Taking all available information into account, and allowing for such non-food uses as seed, waste, feed and industrial requirements, a food balance may be constructed which eliminates the impossible and reveals the probable. It suggests a national average consumption in 1960–61 of 1,850–1,900 calories per head per day. It may be more.[6] Behind this average there are hidden, side by side with ample food for the privileged, certain cases of malnutrition in deficit areas, particularly during the last months of the consumption year. These conditions have given currency to the erroneous view that the whole of China is suffering from conditions of starvation. There is no evidence to support such a contention.

The Chinese Government has not taken the situation lightly; in fact it has acted with foresight in placing promptly large-scale orders of grain with overseas surplus producers, principally with Canada and Australia. Within the last six months or so orders for close on 10 million metric tons of grain have been placed for supply between the beginning of 1961 and the middle or end of 1963. This means an average of approximately 2·5 million tons per annum at the cost of U.S. $150 million or so. In addition China has accepted an advance of 500,000 tons of sugar from

[6] If the population were in fact 700 million, supplies as calculated for 1960–61 would provide only 1,700–1,750 calories per head per day.

the Soviet Union at the cost of nearly U.S. $50 million to be repaid in kind at some future date. These imports represent a dramatic departure from recent Chinese practice, but the orders of magnitude are not substantially larger than they were before China embarked on a policy of domestic self-sufficiency in foodstuffs. The imports will suffice to meet the requirements of the annual increase in population and a portion of China's export commitments to countries of the Soviet *bloc*. They will add to the average daily diet no more than 2 per cent. or 40 calories, but allocated to towns and industrial areas along the coast these shipments may well improve substantially the urban diet.

The diversion of precious foreign exchange to the purchase of foodstuffs is bound to slow down the pace of capital construction in industry; all the more so as agriculture will be less of a source of domestic capital formation than in previous years. It is thus not surprising that the emphasis is on consolidation rather than advance in all current public pronouncements.

It would be erroneous to assume insuperable difficulties in the way of China's meeting her overseas commitments. An intensified export drive in South-East Asia and elsewhere, increased sales of silver and renewed appeals for remittances of Chinese savings overseas are likely to yield the foreign exchange required to pay for the food imports of the next three years. The supply of foreign capital equipment, however, will depend largely, if not exclusively, on the availability of credit facilities. The Sino-Soviet trade agreement of May 1961 allowed for deferred payment, over the next four or five years, of China's debt on current account, possibly equivalent to as much as U.S. $200 million. The conclusion of the 1961 protocol of the Sino-Soviet economic assistance pact of 1959 is still outstanding. It is apparently being negotiated in Moscow at this moment; on its terms will depend the size of China's import this year of Soviet capital goods.

It may take anything up to three years before China can hope to recover from the setback caused by two unsatisfactory harvests. In the meantime the number of consumers will have increased by nearly the size of the population of Great Britain. As matters stand at the moment, the prospects are far from satisfactory for the crop which is due to be gathered in a month or so. Again the possibility of exaggerated accounts of crop failures cannot be dismissed, but a large crop can almost certainly be ruled out. Drought has been reported from Shantung, Honan and Hupeh, typhoons and torrential rains from Kwangtung and Fukien, and hail and snow from a wide area between the Yellow and Yangtze Rivers.

In these circumstances the Chinese Government may be obliged to review its long-term farm policy which was adopted as recently as in

April 1960. The Twelve-Year Agricultural Programme, covering the period from 1956 to 1967 was conceived early in 1956, a few months after the first Five-Year Plan (1953–57) had been published belatedly. At that time long-term planning was being considered throughout the Soviet orbit as an alternative to planning for periods of five years only. The Chinese agricultural programme was designed as a master plan for the period terminating with the end of the third Five-Year Plan. It represented little more than an expression of intent and was considerably cruder than the plans formulated before the last war under the auspices of the National Agricultural Research Bureau. The targets set for 1967 were over-ambitious and unrealistic.

Food output was to increase by 150 per cent. and cotton production was to treble within twelve years. Grain harvests were to increase from little more than 180 million tons in 1955 to over 450 million tons in 1967, an utterly unattainable task. The optimism displayed by the authors of the programme rested on the erroneous assumption that accumulated gains could be derived from a programme of various improvements the success of each of which in fact depended on the simultaneous application of modern methods in several spheres. Irrigation and flood control ranked highest on the list of measures to be taken, and as distribution canals and ditches had been neglected badly during the years of war and civil war considerable improvements were indeed possible. Other measures such as mechanization, seed multiplication, pest and disease control, land reclamation, multiple cropping and the application of fertilisers could be expected to contribute modestly to increases in yields, if they were applied side by side with one another.

As it stood, the programme lacked co-ordination and integration. As it began to be implemented it revealed its principal weakness, an appalling lack of funds. Less than one-tenth of all public investment was set aside for agriculture, water conservancy and forestry together, and two-thirds of this small amount was devoted to water conservation and irrigation. No wonder yields remained in essence dependent on the hazards of nature the impact of which was in no way alleviated, in spite of all official manifestations to the contrary, by the introduction of such farm requisites as fertilisers or mechanical drought power.

As the prospects of progress varied with the change in the weather and the controversy vacillated between "rightist" and "leftist" elements in the Party, so the Twelve-Year Agricultural Programme suffered its downward and upward changes in 1957 and 1958. In the end it was adopted by the National People's Congress without any serious amendment in April 1960. An abridged version was issued in the autumn of 1958 when the campaign in favour of merging collectives into communes was at its height. It was allegedly drawn up by Mao Tse-tung

himself and was described as a Charter for Agriculture. In his report to the National People's Congress T'an Chen-lin, member of the Party's Politburo, described it as even richer and more complete in content than the Agricultural Programme. Its chief innovation was the inclusion of "close planting" as one of the means of achieving increased yields. This method had been abused so much in 1958 that it was exposed to serious criticism by farm specialists, later branded as "rightists." Little is heard of it nowadays.[7]

The setbacks of 1959 and 1960 have made it abundantly clear that the future development of China's main industry does not lie with amateurish plans of this kind. Not unnaturally the emphasis of Government action has shifted in face of the emergency to remedies more in tune with current requirements. The most authoritative statement in this respect was made by the Minister of Agriculture, Liao Lu-yen in an article published early in 1961 in *Red Flag*. In place of the communes, the production brigade (formerly the collective) is to form the basis of farm management at the present stage of development. "Draught animals, farm tools and the other principal means of production belong to the production brigade and the products of the brigade are at its own disposal." "The transition from the present system of commune ownership is a matter for the future."[8] At the same time members of communes are encouraged to engage in family sideline production supplementary to the state-controlled economy, and to keep animals and poultry. The private plot of the members of communes is left for family use and a private trade in farm products is to be permitted where prices may be fixed as a result of bargaining by both parties. Finally, bonuses are to be issued in kind so as to encourage additional efforts on the part of production brigades.

The position of the communes is thus seriously undermined. China's political leaders have realised (like Stalin at the height of his campaign to eradicate the peasantry as an independent economic and social entity) where "dizziness with success" leads. Like Stalin, they have sounded a temporary retreat. The Chinese cultivator has often been described as a contented member of the Communist state. It is of course hardly possible to assess the extent to which he may have succeeded in expressing his dissatisfaction with the way his affairs have been handled on his behalf by Government and Party. It stands to reason, however, to assume that a villager whose desire to own his own piece of land was fulfilled in 1950 became somewhat critical when he was induced five

[7] Reference has been made to this question in the March and April (1961) issues of *Jen-min Jih-pao* and *Kuang-ming Jih-pao* discussing a critical article on the "group concept in agricultural production" by Yin Hung-chang, published in *Jen-min Jih-pao* June 13, 1960. See *Current Background* (CB) (Hong Kong: U.S. Consulate-General), No. 652. [8] *Hung Chi* (*Red Flag*), third and fourth issues, Peking, February 1961.

years later to abandon it again in the interest of the agricultural production co-operative of the higher grade, commonly known as collective. He may even have become hostile towards the régime when another three years later he was persuaded to eat in mess halls, sleep in dormitories and work without reward.

Like peasants elsewhere, the Chinese cultivators are unlikely to turn actively against higher authority, but they are likely to resent the Communist version of farm policy as much as the Russian peasants still do more than forty years after their abortive agrarian reform. In Russia where nature was probably more responsible than men for last year's crop failure, Mr. Khrushchev has demoted senior agricultural experts and Party secretaries. Conversely in China nature has been blamed for calamities which may have had less serious effects had it not been for a deadly conflict between rulers and ruled. Here then may lie the explanation of the dislocations caused for two, possibly even three, years in succession, in the wake of the cruel experiment in social engineering that goes in the name of Communism by way of the communes.

Table 1

CHINA.—FARMS AND FARMERS

	1950	1955	1956	1957	1958	1959	1960
Peasant Households (millions)	105·50	119·20	120·00	121·50	123·20	(125·00)	n.a.
Mutual Aid Teams (millions)	2·70	7·15	n.a.	none	none	none	none
Agricultural Producers "Co-operatives" (000)	0·02	633·70	764·00	784·00	negl.	negl.	none
lower level ...	0·02	633·20	276·00	84·00	none	none	none
higher level ...	0·00	0·50	488·00	700·00	negl.	negl.	none
People's Communes (000)	none	none	none	none	26·00	24·00	(24·00)
Households in Mutual Aid Teams (millions)	11·30	60·40	n.a.	none	none	none	none
Agricultural Producers "Co-operatives" (millions)	0·00	16·90	117·80	119·50	negl.	negl.	none
lower level ...	0·00	16·90	10·40	4·50	none	none	none
higher level ...	0·00	0·00	107·40	115·00	negl.	negl.	none
People's Communes (millions)	none	none	none	none	(122·00)	(124·00)	n.a.
State Farms (000) ...	1·20	2·24	2·25	n.a.	n.a.	n.a.	n.a.
Sown Area of State Farms (000 hectares) ...	155·00	394·60	587·50	n.a.	n.a.	n.a.	n.a.
Employed on State Farms (000)	43·00	134·00	206·00	n.a.	n.a.	n.a.	n.a.
Tractors (15 h.p.) on State Farms (000)	1·20	2·80	4·40	n.a.	n.a.	n.a.	n.a.

Sources: Official Chinese Statistics. ( )=estimated. n.a.=not available.

Table 2

CHINA.—LIVESTOCK POPULATION

	1949	1955	1956	1957	1958	1959	1960
				millions			
Horses, Donkeys and Mules	15·8	21·4	20·8	19·8	n.a.	20·0	n.a.
Cattle and Buffaloes	43·9	65·9	66·6	65·8	(65·5)	65·4	n.a.
Pigs	57·8	87·9	97·8	145·9	160·0	180·0	243·0
Sheep and Goats ...	42·3	84·2	92·1	98·6	108·9	112·5	n.a.

Table 3

CHINA.—CROP ACREAGES, PRODUCTION AND YIELDS

	1949	1955	1956	1957	1958	1959	1960
Acreages				million hectares			
Rice	25·7	29·2	33·2	32·3	32·7	29·4	31·0
Wheat	21·5	26·7	27·3	27·6	26·6	24·1	27·5
Other Grains and Pulses	47·4	52·4	52·7	50·6	45·7	49·2	44·0
Potatoes	7·0	10·0	11·0	10·5	16·3	16·3	(17·5)
Total Grains and Potatoes	101·6	118·4	124·3	120·9	121·3	109·0	(120·0)
Soya Beans	8·2	11·4	12·0	12·6	12·9	(13·0)	(13·0)
Total Foodcrops ...	109·8	129·8	136·3	133·5	134·2	(122·0)	(133·0)
Non-Foodcrops ...	(21·2)	21·3	22·9	23·7	22·1	(20·5)	(21·0)
Total Area sown ...	(131·0)	151·1	159·2	157·2	156·3	(142·5)	(154·0)
Total Area cultivated ...	98·0	110·2	111·8	111·8	107·8	105·0	(110·0)
Multiple Cropping Index	133·8	137·2	142·3	140·6	145·0	135·3	(140·0)
Harvest				million metric tons			
Rice	48·6	78·0	82·5	86·8	113·7	n.a.	n.a.
Wheat	13·8	23·0	24·8	23·6	28·9	n.a.	n.a.
Other Grains and Pulses	35·8	54·9	53·4	52·7	62·0	n.a.	n.a.
Potatoes*	9·8	18·9	21·8	21·9	45·4	n.a.	n.a.
Total Grains and Potatoes	108·0	174·8	182·5	185·0	250·0	270·0	297·0
Soya Beans	5·1	9·1	10·2	10·0	10·5	11·5	(12·5)
Total Foodcrops ...	113·2	183·9	192·7	195·0	261·5	281·5	(309·5)
Yields				metric tons per hectare			
Rice	1·90	2·67	2·47	2·70	3·47	n.a.	n.a.
Wheat	0·64	0·86	0·91	0·86	1·09	n.a.	n.a.
Other Grains and Pulses	0·76	1·05	1·02	1·04	1·35	n.a.	n.a.
Potatoes*	1·40	1·88	1·99	2·09	2·80	n.a.	n.a.
Total Grains and Potatoes	1·06	1·46	1·42	1·54	2·03	2·48	(2·47)
Soya Beans	0·62	0·80	0·88	0·80	0·81	0·88	(0·96)
Total Foodcrops ...	0·86	1·22	1·21	1·24	1·67	1·97	(2·01)

Sources: Official Chinese Statistics.
* in grain equivalent. n.a.=not available. ( )=estimated.

Table 4

CHINA.—FOOD RATIONS 1960-61

	per month		per annum	
	light workers	heavy workers	light workers	heavy workers
Grains	25 lbs.	40 lbs.	135 kilos	218 kilos
Sugar	4 oz.	4 oz.	1.35 kilos	1.35 kilos
Meat	12 oz.	12 oz.	4·10 kilos	4·10 kilos
Vegetable Oil ...	12 oz.	12 oz.	4·10 kilos	4·10 kilos

Table 5

CHINA.—GRAIN IMPORTS 1961-63

	000 million metric tons				Total (Commodity Weight)
	Rice	Wheat	Barley	Flour	
from Burma ...	0·35	—	—	—	0·35
from Canada ...	—	5·89	1·28	0·03	7·20
from Australia ...	—	2·08	0·30	0·04	2·42
from Europe ...	—	0·03	—	—	0·03
Total	0·35	8·01	1·58	0·07	10·00

Table 6

CHINA.—FOOD BALANCE 1960-61

	Gross Domestic Production	Non-Food Uses	Net	Food	Supplies
	million metric tons			Kilos per head	Calories per head per day
Grains	140·0	46·0	94·0	145·0	1,430
Potatoes	40·0	17·0	23·0	35·0	90
Pulses	10·0	6·8	3·2	5·0	50
Soya Beans	8·0	4·8	3·2	5·0	50
Sugar	1·5	0·2	1·3	2·0	20
Fruit and Vegetables	80·0	40·0	40·0	60·0	50
Meat and Poultry ...	5·7	0·5	5·2	8·0	65
Eggs and Fish ...	5·0	1·1	3·9	6·0	15
Fats and Oils ...	3·0	0·4	2·6	4·0	90
Total Domestic Imports ...	—	—	—	—	1,860
Grains	2·5	0·5	2·0	3·0	30
Sugar	0·5	—	0·5	1·0	10
Grand Total ...	—	—	—	—	1,900

Sources: Official Statements.
Estimates.

The figures in these tables have been compiled from numerous sources over the years.

The Effect of Transportation on Famine Prevention

By JOHN WATT

THROUGHOUT China's history widespread famine has been a frequent occurrence. While natural calamities have been primarily responsible for its appearance, there is no doubt that consistent lack of communications has always been a serious obstacle to the relief of famine areas. During, for example, the great drought famine of 1877–78, which affected Shensi, Shansi, Honan and Hopei, efforts to get food into the Shansi plateau foundered because of the difficulty in sending supplies up the only direct track from the eastern ports, where food was arriving in abundance. As a consequence of these conditions up to thirteen million people may have lost their lives. Since then there have been a number of other severe droughts and floods, but with the introduction of railways and gradual improvement of the existing system of communications, distribution of relief has undoubtedly become more effective and loss of life less widespread. This brief survey will accordingly examine China's present transportation system and its ability to alleviate the hardship caused by last year's natural calamities.

(a) The situation in the country as a whole: According to official statistics the country possessed at the end of 1958, 31,000 km. of railways in route open to through traffic, 40,000 km. of waterways navigable by steamboat and another 110,000 km. open to junks and barges, and 400,000 km. of highways consisting very largely of simple routes feeding railways and waterways.[1] The railways, which already carry the bulk of the through traffic, have now begun to penetrate all major areas of population except those adjoining the middle Yangtze between Hankow and Chungking. In the north and east of China proper they form an interlocking network. Railway freight turnover, which stood at 60 milliard ton-km. in 1952, is said to have increased to 185 milliard in 1958.[2] On the other hand construction of track and of engines and freight cars has not been able to keep pace with the general rate of expansion of the economy, because of their heavy consumption of steel products. In consequence the railway system is designed and used to meet only the

1 State Statistical Bureau, *Ten Great Years, Statistics of the Economic and Cultural Achievements of the People's Republic of China* (Peking: Foreign Languages Press, 1960) p. 144. See also Wang Shou-tao, Minister of Communications, in *Jen-min Jih-pao* (*People's Daily*), September 23, 1959.

2 State Statistical Bureau, *op. cit.*, p. 148.

more urgent industrial and strategic needs of the country, and coal is in normal circumstances its predominant cargo. Even so it is easily overburdened, as became clear during 1958.

Inland waterways provide a second and long-established system for long-distance transportation in China proper. They occur mainly in the centre and south of the country. Owing to silting, the Yellow River and its tributaries are not generally navigable, and although the plan for controlling this dangerous river will, when completed, allow the passage of 500-ton tugs as far as Lanchow in Kansu province, this is still a distant prospect. Since 1952 the volume of goods carried by ships and barges has apparently increased five times to 76 million tons, equivalent to one-fifth of the volume carried by the railways.[3] In addition double the former amount is estimated as remaining on simple rivers in simple vessels, which are being gradually invigorated by the introduction of motorised and eight-sail junks.[4]

Roads and highways carry the bulk of short distance freight in China proper and are the chief and in many cases only means of communication in the north and west. Development of modern road transport facilities has been held back by lack of means for the production of vehicles and by the low volume of internal output of petroleum products. Moreover, before the first five-year plan paved roads were themselves something of a luxury, it being estimated that up to the end of 1952 one-third of the total number of counties in China were inaccessible by truck. In the next seven years, however, road mileage increased four times to an estimated 480,000 km.[5] But since modern vehicles continue to remain in short supply native means of transport—such as carts, barrows, pack animals and human bearers—still account for three-quarters of the volume of highway freight in both town and countryside.[6]

During the last three years short-distance transportation has been extended by the development of indigenous railways. These consist first of "simplified modern railways" built with rails using little over half as much steel per unit length as a normal railway and employing "light duty" locomotives. Secondly, there are "native railways" with tracks made of cast iron or of timber covered with sheet iron, and using locomotives powered by gas, diesel or car engines or small steam engines or converted lorries. Finally there are "railways" with wood or bamboo tracks and using hand operated carts. By March 1960 cast iron and light

[3] *Ibid.*, p. 146.
[4] Wang Shou-tao, *op. cit.* Mention of these junks was made in *Jen-min Jih-pao*, September 26, 1959, and by New China News Agency, December 4, 1959, which stated that there were then 400 motorised junks in Hunan and Kiangsu. Eight-sail junks were invented in 1958.
[5] State Statistical Bureau, *op. cit.*, p. 144 and *Jen-min Jih-pao*, February 19, 1960.
[6] Wang Shou-tao, *op. cit.* See also his speech to the first session of the National People's Congress, April 29, 1959.

steel railways were estimated to total about 4,000 km. in length with a further 2,000 km. under construction.[7] Although these distances amount to little in a country the size of China it is clear that the short distance railways, which can employ both local manpower and the products of small scale iron and steel enterprises, represent a significant advance in the development of China's transport services. Their use has not been limited to any particular branch of the economy and they are designed to feed main land and water routes and to be convertible at a later stage into normal railway lines.

(b) The situation in the provinces affected worst by natural calamities: Among last year's various calamities drought was the most serious. Official reports stated that it affected almost every province and autonomous region except Tibet and Sinkiang, falling worst on Hopei, Honan, Shantung and Shansi. Typhoons and flooding were also severe, striking twenty provinces and autonomous regions and in particular coastal Kwangtung, Fukien, Kiangsu and Shantung, and the north-east, especially eastern Liaoning.

Drought has for long been the most damaging and dreaded of China's calamities. Because of low rainfall during the winter and spring seasons, the North China Plain and the Loess Plateau are very prone to drought and their populations, especially that of the latter area, have frequently suffered from its effects. The plight of Shansi during the famine of 1877–78 has already been touched on. At that time access into the province was restricted to three land routes from the north-east, east and south-west respectively. Since then railways have been laid along these routes, converging on Taiyuan in the heart of the province and linking it with Peking and Tientsin and with the trans-Mongolia railway in the north and the Lunghai railway in the south-west. In addition Shansi was the scene of the earliest experiments in native railways and has since figured prominently in their development.

Honan and Hopei were among the earliest provinces to be provided with railways, and Hopei now possesses quite a number of lines radiating from Peking, Tientsin and Shihchiachuang. A limited degree of water transportation also exists, and Honan has been in the vanguard of the development of native railways, which according to a recent report stretch to 700 km. and which during 1959 carried a million tons of freight.[8] Shantung was also the site of one of China's first railways. Two others have since been added, the later by the present government in 1955, and there are at least 600 km. of local railways.[9] Both Shantung

[7] New China News Agency (NCNA), August 8, 1960, and speech by Lu Cheng-tsao, Deputy Minister of Railways, to the Second Session of the National People's Congress, *Jen-min Jih-pao*, April 9, 1960.
[8] NCNA, August 3, 1960.
[9] NCNA, August 20, 1960.

and Hopei are the scene of coastal shipping and in Shantung the lower reaches of the Yellow River are navigable to steamers. Finally Tientsin, which is in Hopei, is the largest port in the north and is also a convenient station for grain imports.

As far as the areas affected by typhoons are concerned the most spectacular development in communications has undoubtedly taken place in Fukien. Since 1949 two railways have been opened, the first running from the Chekiang-Kiangsi line to Amoy, the second branching from it to Foochow. In addition three principal trunk routes have been rebuilt and two others opened. The total length of these new and improved road and rail routes amounts to 2,600 km.[10] Although these routes serve a primarily strategic purpose there is no doubt that they have transformed the province's communication system, which was previously very backward, and no doubt as to their ability to serve coastal areas, the more so as coastal shipping has been reduced owing to the state of tension existing in the Taiwan straits. Besides the trunk routes, a number of short distance roads and railways exist, linking forest, industrial and mining areas with the Yingtan-Amoy railway.

In Kwangtung, besides the long established centre of communications at Canton, two railway lines have been recently added in the south-west connecting the Leichow peninsula with the Hunan-Kwangsi railway. On Hainan island 420 km. of trunk roads have been constructed since 1949 and another trunk route begun on the mainland.[11] The three main tributaries of the Pearl river delta and the Han river, which reaches the sea at Swatow, are navigable, and the West river is connected by canal with tributaries in Hunan of the Yangtze. On the other hand it seems clear that there are areas lying east and south-west of Canton and between the East and West rivers and the coastline which are not well served by transportation and which in the event of natural calamities and exhaustion of local supplies could not easily obtain relief from elsewhere.

Kiangsu, which is China's most densely populated province, has been frequently the victim of flooding, caused generally by the overflowing of the Yangtze, Hwai or Yellow rivers. While railways reach the coast in both the north and south of the province, inland and coastal navigation form the chief source of communications, as can be expected of the province standing at the mouth of the Yangtze and the southern end of the Grand Canal. Inland navigation is highly developed, especially along the Yangtze, and coastal shipping runs between Shanghai and other ports in the north and south of China and abroad.

Compared with all these provinces the North-east should certainly be the least affected by the outbreak of natural calamities. Apart from its

10 State Statistical Bureau, *op. cit.*, pp. 70, 73, 74.
11 *Ibid.* p. 73.

industrial centres it is by far the least populated and it also possesses the most highly developed railway network. In eastern Liaoning itself Shenyang, the provincial capital, is the hub of a complex railway system, and in the south-east of the province there are a number of ports, among them Lushun and Dairen.

(c) Conclusion: The last great drought famine, which occurred in 1928 and centred on Shensi, was held to have been no less severe than that of 1877–78. But loss of life, although running into millions, is regarded as having been appreciably less widespread than during the earlier famine.[12] The last great flood took place during and just after the Second World War when the dykes of the Yellow River were broken and the river changed its course. As a result of this disaster rather under a million people were estimated to have lost their lives. Last year's calamities have been described in China as being the worst in a hundred years, and this may well be so, because of the coincidence of widespread drought with typhoons and flooding. But this does not imply that the effects of these disasters will be equal to those of previous years, and least so in the areas of flooding, which, in contrast with the massive floods of major rivers in the past, have been dispersed over many provinces and were at their worst in the generally accessible coastal areas. It seems reasonable to conclude, therefore, that if famine does occur it will not be for lack of transportation. Since the 1870s communications in China have steadily improved, and all the main areas struck by last year's calamities are now served by a growing variety of long-distance and other routes, except for isolated localities, in particular in the extreme south, where severe hardship is indeed being experienced.

[12] For a recent survey of catastrophic deterrents in China see Ping-ti Ho, *Studies on the Population of China*, 1368–1953 (Cambridge: Harvard University Press, 1959) pp. 227–236.

The Situation in Tibet

By GEORGE N. PATTERSON

THE overall picture of Tibet today is one of complete Chinese control—not in the pre-revolt sense of control through the Dalai Lama, Tibetan officials and institutions, but direct control by Chinese personnel over Chinese institutions reorganized on the Chinese pattern through Chinese heads of departments and Chinese cadres as in China itself.* There is no Tibetan in any position of influence and trust, and all pretence that there is has been dropped, except for photographs with visiting dignitaries. Only one gesture in this connection has been made by the Chinese authorities in the past year and that was to invite the Panchen Lama, Cabinet Minister Ngabu Ngawang Jigme, chief collaborator since the signing of the 1951 Seventeen Point Agreement, and Pangdatshang Topgyay, Chairman of the East Tibetan Autonomous Government and Khamba leader, to Peking. Since they returned to Lhasa, they have not attended any major function. One luncheon party to be given to the "officials of the Panchen Erdeni Conference Committee" in the Norbulingka, the Dalai Lama's former summer palace, was suddenly cancelled for the rather specious reason "due to a bad weather forecast from the meteorological department." Since then persistent rumours have arrived in India that the Panchen Lama has "disappeared" or is dead.

After the initial propaganda following the Dalai Lama's escape in March, 1959, and his arrival in India, namely, that he was "abducted under duress" from Lhasa by Khamba rebels, then "kept under duress" in India by the Indian Government, the Chinese launched a ruthless campaign to exterminate the rebels still in the country and eliminate any possibility of a similar rebellion occurring in the future.

The main target of their attacks was the monasteries. This was not so much due to the high proportion of monks who took part in the fighting (although a considerable number of them did, and, more

* I would like to make it clear at the beginning of this article on conditions obtaining in Tibet at present that it is based on reports which by the very nature of the situation in that country cannot be wholly certain. But within the exigencies of that situation I have sought to weigh as carefully as possible the reports brought from numerous sources, checking and cross-checking them with others in no way associated, known to me but unknown to each other. Some of these reports have been brought by refugees, but most of them by messengers either sent from India with special instructions from their officials or leaders or sent from inside Tibet to these officials and leaders in India. There are also reports from other sources at a higher level which I am not at liberty to disclose.

important, the monasteries were in many places the repositories of large stocks of ammunition and food supplies which kept the rebels going) as an excuse for breaking once and for all the priestly hierarchy's domination over Tibetan administration. With the Dalai Lama out of the country, and many leading monks with him, it was an excellent opportunity to do what the Chinese authorities had always wanted, but had not been in a position to attempt for fear of precipitating a nationwide uprising.

Thus, the primary target was the complete destruction of all that pertained to the priestly feudal system. The three large monasteries in the Lhasa area—Sera, Drepung and Ganden—training centres for all of Tibet's priests, were first of all shelled then denuded of all religious treasures. This action was repeated it appears with all monasteries throughout the country, the Chinese authorities identifying the action with the destruction of religion as well as the feudal system by publicly announcing on every occasion that the gold and silver idols and objects were being melted down to make bullets. The brainwashing and indoctrination of the priests was also directed towards this end. The Chinese authorities were not satisfied just with submitting tens of thousands to forced labour; they first crudely forced priests and nuns to dance together, and even copulate in the monasteries under the threat of death. They then used the monasteries themselves as centres for indoctrination. Since the ending of the revolt several thousand truckloads of religious treasures consisting of idols, paintings and manuscripts have been taken to China and monasteries have been turned into storage places and garrisons. The monastic system which previously dominated Tibet for centuries would seem to have been destroyed beyond repair. Even in the unlikely event of the Dalai Lama and his government returning to Tibet it can be assumed that the Tibetan officials themselves would not forgo the opportunity to be rid of priestly authority.

It was no doubt a dawning realisation of this new strategy which jolted the Panchen Lama into contemplating, as some reports suggest he did, a rebellion similar to that of the Dalai Lama in the months following the revolt. However, he had been a puppet of the Chinese for too long to command any significant following; first his father, then his relatives, then his entourage were arrested, imprisoned and sent to do forced labour. As mentioned already, he himself is kept isolated and used only for photographic purposes when necessary.

In Lhasa itself, and afterwards in other towns and villages, the Chinese authorities divided the city into four zones, north, south, east and west, each zone being supervised by a branch committee of the municipality organisation of the Chinese Communist Party, as well as "people's

organisations" such as the People's Committees. These branch committees were, and are, responsible for public accusations, confessions and self-criticisms among the Tibetans. All citizens have been formed into groups of ten persons, with a Chinese political worker in charge of each, and these groups were forced to meet every day after their day's quota of labour was finished.

At first, all Tibetans, both lay and priest, were given just adequate supplies of food if they completed their labour quotas, but after a few months these were cut down as ration cards were issued. Even the ration quotas were not forthcoming.

There seems no doubt that the initial starving was a punitive measure, but the ration cards were issued because of the force of circumstances. Briefly, these circumstances were due to the tactics of the rebels who, over the three-year period of the revolt, deliberately and systematically destroyed all crops within reach of the Chinese, and then took to the inaccessible parts of Tibet. This scorched earth policy, combined with the blowing up of lines of supply, would, they hoped, starve out the Chinese or cause revolt among the Chinese troops; but before it could become effective, Lhasa had revolted, the Dalai Lama had fled and the rebels had run out of ammunition.

However, with a minimum of 10,000 rebels still in the mountains of East Tibet [1] having access to and able to cut the two main highways from China to Lhasa, together with the influx of Chinese reinforcements following on the revolt (a conservative estimate of Chinese troops in Tibet at present is 300,000, not including the hundreds of thousands—the Tibetans say three million—of Chinese civilian colonisers), the food situation became almost immediately critical. It seems to have been these factors rather than a desire for revenge that led the Chinese to remove tens of thousands of Tibetans, particularly children, down country to China, so that the available food could go to the necessary Chinese troops in Tibet.

At the same time as they were eliminating the monasteries—the greatest landlords and grain-storers—the Chinese authorities decided to reorganise on the Chinese pattern right away the land-holdings of the monasteries and the high officials who had fled to India. This they hoped would serve the dual purpose of placating the people for the loss of their Dalai Lama, monasteries and officials, and at the same time provide a wide opportunity for developing agriculture on a more productive scale throughout Tibet.

These measures might have had some success—at least as much as in China—had not the devastating natural disasters of 1960 affected Tibet

[1] See my article in *The China Quarterly*, No. 1, January–March 1960.

as well as China.[2] First of all large-scale floods, then famine, struck Tibet, and with no supplies available from China the food situation in Tibet became desperate.

The food trade was nationalised; no merchants were allowed to sell, and only Chinese government trade shops were allowed to supply rice, tsamba, flour and barley. The Chinese Army also requisitioned all supplies of butter in outlying areas and farmers themselves were only allowed to buy it back at Government shops and prices. Grain for the spring sowing in 1960 which had been promised was not forthcoming and so the land which had been given to the peasants with such great promises of productivity, and had been ploughed in this hope, had to be left unsown.

That this state of affairs worried the Chinese authorities was evident from their actions towards the end of 1960 and beginning of 1961. From the time of the revolt onwards an incessant campaign of anti-Indian propaganda and vilification of the Dalai Lama and his escaped government had been pursued in public gatherings and in the press. In December 1960 the Lhasa authorities ceased holding the interminable meetings, giving no reason, but announcing significantly that "Socialism in its pure form will not be introduced for four years"—the same formula which had been used in 1956–57 in an attempt to head off the revolt. They were also quick to suppress the details of a large uprising in East Tibet, near Jyekundo, where thousands of Chinese are reported to have been killed and two airlifts of paratroops were required to restore order. The Chinese admitted the revolt in a public meeting in Lhasa, without giving figures, but claimed that the paratroop reinforcements had brought the situation under control. Knowing that scores were dying of starvation in Lhasa and hearing rumours of hundreds and even thousands dying elsewhere, and worried by the growing disaffection among the Chinese troops and personnel in Tibet, the Chinese authorities have had to be quick to anticipate anything which might precipitate another major explosion.

Resistance on anything like the former scale, however, is completely out of the question, although sporadic raids take place from time to time, particularly in East Tibet. This is due not so much to the back of the rebellion having been broken, as the Chinese claim, as to lack of supplies, lack of a proper central base, and lack of wireless operators to bring planes to a central air-drop regularly. Within the past few months there have been an increasing number of raids in West Tibet by Tibetans who have crossed over into Tibet. These men have been reinforced by others who, disappointed with their reception in India, have

[2] The Chinese have never admitted that Tibet, like China proper, was affected by serious natural disasters in 1960.

made their way to Nepal's northern borders to take part in marauding attacks on the Chinese from there. There are reckoned to be 20,000 Tibetans on Nepal's northern borders, but there are at the most three groups containing as many as 3,000 men or so which can mount effective offensives worrying to the Chinese. If the King of Nepal, unlike the previous Nepal Government, is inclined to help these groups, they could prove a deadly menace to the Chinese whose supply line to the Chinese forces in Ladakh and the north runs along the Nepal border.

Tragically, but not unexpectedly, the Tibetan exiles in India are quarrelling among themselves and breaking up into different "parties." It was evident even before the Lhasa revolt that this was bound to happen, for the Khambas, who had been responsible for the revolt from 1952 onwards, were bitter at the reluctance of the Lhasa Government officials to join in the revolt. This bitterness was temporarily overcome when Lhasa finally helped them with arms, ammunition and food in 1958, and then joined in the revolt in March, 1959. But after the Dalai Lama and members of the Lhasa Government arrived in India the various feudal cliques which had always intrigued for the hereditary positions of power continued their normal practices. The Khambas, and those who had helped organise the Lhasa revolt and the Dalai Lama's escape, wanted a strong line taken—the Dalai Lama to make a personal appearance and speech at the United Nations, a request for military supplies to be sent to Tibet from interested countries and, if necessary, defiance of India and a request to go to some other more sympathetic country, such as Thailand, which would permit political activities and recognise an exile Government. This group is represented by such formidable figures as Ministers Surkhang and Yuthok (the former was named by the Chinese as the one who planned the revolt with the Khamba leaders as early as 1954) with one Manang Abu, a Khamba who organised the Lhasa revolt, and several Khamba leaders.

The other major group is formed of the majority of the Dalai Lama's Government who fled with him and who, despite lip-service to a desire for "reforms" in statements to the press, probably want a return to the status quo. This is the strongest representative group and has the ear of the Dalai Lama through his brother Gyalo Thondup and his brother-in-law Puntshok Trashi; it includes Tibet's *eminence grise*, Tsepon Shakabpa. Gyalo Thondup, who has had no previous experience of politics of any kind, and Shakabpa, who has been on one or two delegations and is a shrewd manipulator of the feudal politics of Tibet, were chosen as representatives of this group "because of their experience of western politics"—although, strictly speaking, their "experience of western politics" has been limited to living in India for ten years or so as private persons. Neither of them took part in the revolt until a few

months before the Lhasa uprising, when they were forced to do so under threats. They were two of the three leaders of the delegation to the U.N. in 1959–60. Gyalo Thondup is still the leader of the Tibetan delegation to the U.N. in 1960–61, although strong pressures are being brought to bear on the Dalai Lama to remove both him and Shakabpa from positions of influence as being neither able nor representative.

The intrigues between these two groups have caused a major split among the Tibetans. At present Ministers Surkhang and Yuthok refuse to participate in any "discussions" on Tibetan affairs so long as Shakabpa and Thondup dominate the proceedings, because, they claim, both these men have too many personal interests in India, took no part in the revolt until the final few months—and that from the safety of India—and are disliked by 80 per cent. of the Tibetans, particularly the Khambas.

The Khambas themselves, uninterested in these particular political intrigues, have only two demands: one, they want arms to fight the Chinese and, two, they want representation in the new Government of Tibet when they have defeated the Chinese. They, too, are split into several factions, however, being manipulated by the two major groups which, despite what may be said to the refugee organisations, the Indian Government or the United Nations, whip up support among the rank-and-file Tibetans in India with promises of military help and an early return to Tibet. There are officially 60,000 Tibetans now in India, but the true figure, including those in Nepal and Bhutan, would probably be nearer 100,000. The Chinese are imposing few restrictions on others coming across the borders, and are even encouraging Nepalis and Muslims in Lhasa to leave, and are infiltrating their own agents among them. This not only adds to the confusion among the Tibetans but increases the dangers to the border States as well.

Ferment Down Under

By I. G. MAYO-WREN

Among the minority of Communist Parties supporting China at the Moscow Conference last November was the Australian party. The feuds that have riven that Party since then illustrate the most damaging result for the Communist movement of the Sino-Soviet dispute—the end of the era of unique ideological authority.

THE ramifications of the Sino-Soviet polemic are now to be seen in the Australian Communist Party. For a long time there have been faint echoes of the dispute in the party journal, but, since the Moscow Conference which ended last December there has developed a very considerable interest in the ideological and policy dispute among even the rank and file. In point of fact the Moscow Conference appears to have had an apparent stimulating effect since it has become clear that the attempt to heal the Sino-Soviet rift has failed; nonetheless the party has maintained that no dispute exists.

The Australian Communist Party is in certain respects remarkable and even unique among parties outside the Sino-Soviet *bloc*. In Moscow last December it was the only Western party from a developed country to support the Chinese delegation at the Conference. It is this very fact that has now become widely known in Australia even at a low level within the party.

The top leadership of the Australian party is traditionally Stalinist and furthermore it has always had a leftist sectarian tinge. During the 1920s and 1930s the party sustained serious damage by its attitude to the Australian Labour Party, which it denounced as a "social fascist party." Its attempts to rival the Labour Party in the trade union field misfired badly and the mistakes of the period have been acknowledged by the Secretary-General, Lance Sharkey, in his *Outline of History of the Communist Party of Australia*. Between 1948 and 1950 these mistakes were repeated with similar results and since approximately 1954 a militant policy has failed to gain for the Communist Party of Australia the entire support of left-wing forces in Australia. The party leadership appears unable to appreciate the facts of life in prosperous Australia. Since 1958 particularly, an increasing tendency to conform with the Chinese ideological line has been apparent in the party. Not unnaturally,

a party with such a leftist revolutionary tradition has been irresistibly drawn towards the Peking line and the study of issues of the Party's Central Committee magazine *Communist Review* over the past two years shows an increasing tendency to favour the Chinese on a number of issues. In particular, the views expressed after the failure of the Paris summit were clearly much closer to the Chinese point of view than to that of the Soviet party.

However, it is since the Moscow Conference that adherence to the Peking line has become apparent to the middle and lower levels of the party and has been shown by party members asking awkward questions about the various ideological issues—questions to which they have received no satisfactory reply. They have noticed that the party favours literature emanating from Communist China rather than from the Soviet Union and that such answers as they do receive come from Chinese theoretical Marxist-Leninist journals. Recently they have been finding the answers to some of their questions in articles in the Western Press. In short, they find recent articles which have appeared there on the Sino-Soviet dispute completely convincing and consistent with the views expressed by recent returnees from China so that they now cannot accept the old story that the dispute does not exist.

The position that has immediately resulted from this realisation is that certain elements at all levels of the party are demanding discussion within the party of the issues concerned. As good Communists they are putting the case that if this is not permitted "intra-party democracy" is nothing but a sham. There is thus a growing opposition to the leadership within the ranks of the party which has as its prime demand intra-party discussion of party policy and of the Sino-Soviet issues. In point of fact it seems fairly clear that the dissidents tend to favour the Soviet line on a number of points, though of course in view of their primary demand it is premature for them to put forward Soviet views. These comrades cannot understand how it comes about that the Communist Party of Australia should support the extreme adventurist line of the Chinese.

The leadership's reaction to this state of affairs is to brand those who want discussion within the party, of the party's policy (and Sino-Soviet differences), as Trotskyists. This is, on the face of it, weird for of course the opposition in the party being closer in its views to the Soviet side of the argument might, if anything, be considered as deviating to the right. The Chinese would certainly so regard it. However, the party leadership, partly in order to put up a smoke screen over the Sino-Soviet dispute, has accused the dissidents of Trotskyism on the ground that they are advocating the right to form party factions and demanding that the party press be opened to views different from those of the leadership.

The charge is thus one of Trotskyism with regard to the mechanics of party organisation and discipline, but not a substantive accusation of adherence to Trotskyite ideology. The situation in Australia is the more interesting since the real Trotskyists in the country, that is, those who are members of the Fourth International, are wholeheartedly and openly in favour of the Chinese Communist Party in its dispute with the Soviet Union and have appealed to "all Communist and militant workers to give uncritical support to the party leadership's endorsement of the 'Chinese' line." This is a telling point which the dissidents are turning back on the leadership.

A criticism of the leadership of the Communist Party of Australia appeared in veiled form in the Australian magazine *Nation* on February 11, 1961, and was written by a leading Australian intellectual, Ian Turner. Turner was expelled from the party as a revisionist because of his attitude to the Hungarian crisis of 1956. This criticism has now been followed by his wife's resignation from the party. Turner accuses the leadership of the Communist Party of Australia of sectarianism and of becoming isolated from the reality of the Australian scene. Last, but not least, Turner devotes attention directly to discussing the Sino-Soviet dispute at the Moscow Conference and the Australian party's role there.

The article has caused considerable concern in the Communist Party of Australia and interest within the New Left Movement in Australia; for the opposition within the party is, in fact, an intellectual opposition against a dogmatic Stalinist leadership.

Since Turner's article was published, events have not stood still in the Communist Party of Australia. One of the party members who has been expelled is a well-known Victorian trade unionist, Geof McDonald, who has spent eleven years as an organiser and thirteen years as a party member, and who has a name as a ranking theoretician in the Melbourne apparatus. The accusation against McDonald is, of course, Trotskyism—which he refutes in a public pamphlet entitled "A letter to my Comrades." The pamphlet says:

> Comrades just returned from overseas point out that in the British Communist Party and in other parties, there has been a complete and open discussion on the Chinese-Soviet differences. The refusal to allow such discussions here and the attempt to pretend that no differences exist betray a contempt for rank and file intelligence that can only come from leaders grown arrogant and isolated from the membership. I do not deny the right to interpret the Chinese material as a criticism of a right wing tendency in the Soviet Party, and of Khrushchev's alleged 'revisionism' but I do say that if we are to appreciate the problems we must read the Soviet material as well as the Chinese, and that in conducting a discussion on this matter we must avoid taking an unbalanced stand. . . . Dogmatism in our leadership has led to unnecessary sectarianism that is harming the peace movement and the mass movement generally.

Clearly this expelled dissident tends to be pro-Muscovite.

Even more remarkable than McDonald's views was the manner that he sought to bring them to notice after his expulsion from the party. Recently Melbourne witnessed a remarkable incident. When Communist Party branch secretaries and "agitprops" called at the party office in Melbourne's Elizabeth Street, they found McDonald making a one-man demonstration and passing out his leaflet to those entering the building. For five hours, McDonald put his case and defied attempts to remove him. Party officials first threatened him, changed their tune and pleaded with him, changed again and threatened him with legal action for trespass. Then his leaflets were snatched from him—but he had a reserve supply in his pockets (McDonald has been a party member for a long time). The party then brought up four strong-arm members of the Seamen's Union to remove him but they were immobilised by his appeal to their comradely solidarity.

The party leadership is now very concerned and top level meetings are discussing the situation. Further expulsions are threatened, the most recent being the Secretary of the Soviet-Australia Friendship Society, and the recognised senior party tutor in political philosophy. More intellectuals are reportedly on the point of being disciplined by the party and progressive and trade union circles are buzzing with rumours.

The party is at the same time dogged by yet another related question. This year is election year in the Communist Party of Australia and a party congress is due. This Congress must elect a new forty-member Central Committee and, for the first time in thirteen years, will probably have to deal with the succession question, for the President is ailing and still in a Moscow hospital after being taken ill prior to the Moscow Conference. The Secretary-General is reported to be indicating that he may retire and in these facts lies the rub—for the present leadership of the party is in fact supporting the Chinese position because of an alliance at a high level between elements who are merely traditional Stalinists who sympathise with the Chinese and certain comrades who have been trained in Peking (where all cadres have been trained in recent years). These latter totally China-orientated party members are represented in the Politburo by L. Aarons who is strongly tipped for the succession. There are thus in all three groups within the party, for the opposition, to which we have referred is still strongly represented. The coming Congress will be composed of representatives from three factions and the aspirants for the key positions will have to engage in intensive lobbying in order to marshal support.

SCIENCE IN CHINA

On December 26–27 a Symposium on the Sciences in Communist China was held in New York under the sponsorship of the American Association for the Advancement of Science with the support of the National Science Foundation in Washington D.C. With the kind permission of the AAAS, we are publishing below revised and shortened versions of four of the contributions together with a report on the whole proceedings. The AAAS will be publishing the contributions to the symposium in book form later this year.

Report on the AAAS Symposium

By BETTY FEINBERG

THE AAAS Symposium on the Sciences in Communist China covered pretty thoroughly all of the scientific literature from that isolated land that is available in the Western world. The amount of such literature turns out to be substantial, but the scientists analysing it are faced with the problem of sorting out facts from propaganda, real achievements from grandiose claims. That there has been a great deal of real achievement in the ten years of Communist rule emerges beyond doubt. China, for years torn with external war and internal revolution, began the decade of the fifties with no systematic programme in science, no schools capable of training scientists and technicians at an advanced level, and only a handful of scientists—mostly Western trained—capable of doing the research, planning and building needed to get industrialisation under way, while at the same time taking on the enormous task of educating the new generations of scientists and technical specialists required to operate an industrialised economy.

Perhaps China's greatest need is for scientific manpower, and her present course is to aim for rapid increase in quantity, even at the cost of a concomitant decrease in quality, in the belief—or hope—that the naturally gifted will emerge from this minimally educated mass to provide leadership and improve quality.

Leo A. Orleans, Library of Congress demographer, described China's educational system. In their efforts to get men with some training into jobs as quickly as possible, the Chinese have resorted to shortened periods of schooling in very narrowly specialised fields. For example, an electrical engineering student may be taught electricity but no other

aspects of physics. A student may study hydrography but no other areas of geography. There is some evidence, however, that the Chinese are finding that often the young graduates of such programmes are not prepared to handle the jobs that they are assigned to do, and more college programmes of four or even five or six years are being instituted.

Political domination is great in the schools as in all aspects of Chinese life, and in spite of their recognition of the importance of science and education, the Chinese Communists seem determined to keep the position and prestige of educators, scientists, and engineers low. The régime distrusts and fears free-ranging inquiry, and takes great care to keep the scientist "in his place," often belittling his work while extolling the ideas of peasants or workers. Many scientific journals reveal a blurring of the lines between serious scientific effort and the pseudo-technical "research" of the masses.

Education and the industrialisation programme are intimately connected in China. Students and teachers spend part of their time in production and field work—partly, no doubt, because the economy cannot wait for them; on the other hand workers and peasants, even the aged, are constantly being educated in the ways of an industrialised society—either directly in classes or through the innumerable group meetings they must attend and work programmes of various sorts that they are expected to take part in. A very interesting insight into the rationale of the famous back-yard smelting furnaces was provided by electronics engineers Yao T. Li and Way-dong Woo. The back-yard smelting programme, generally condemned for its inefficiency and for the high cost and low quality of the pig-iron produced, is usually cited as an example of mismanagement and stupid planning on the part of the government. Li and Woo, while admitting its inefficiency as a production technique, maintain that it was nevertheless a highly effective educational device, exposing great masses of people to the fundamentals of industrial production.

There are real examples of bad planning on the part of policy makers, many of them reflecting the lack of adequate scientific knowledge on the part of the planners. Communes, for example, according to geographer Herold J. Weins, were often planned without reference to their local situations. He cites the case of a commune ordered to become self-sufficient in growing cotton in an area unfavourable to cotton, and another ordered to produce its own steel in an area practically devoid of iron ore. Another commune with thin, arid soil was ordered to raise its rice production drastically, while the large forest resources of the area were completely ignored. Even badly-trained geographers, it is clear, can help greatly in correcting such errors.

Social science in Communist China was found to be practically non-existent, except in archaeology and linguistics, areas described by Professor Francis L. K. Hsu. Archaeological finds during the past ten years have been impressive, notably the following prehistoric apes or men: *Gigantopithecus blacki*, estimated age 500,000–700,000; *Sinanthropus Pekinensis*, 400,000–500,000; Mapa Man 200,000–300,000; Tingtsun Man, 100,000–200,000, and Liukiang Man and Tzeyang Man, less than 100,000 years old.

China is currently undertaking the most dramatic and far-reaching linguistic reforms in history. Her language, an extremely difficult one to learn, is a major stumbling block to mass literacy and full industrial development. The Chinese are working on the standardisation of the Peking (Mandarin) dialect and searching for means of propagating it as a *lingua franca* for all China, which now has at least seven mutually unintelligible dialects. The aim is universal adoption of a Peking dialect somewhat relaxed in pronunciation to suit speakers of local dialects. Work is also being done to simplify and alphabetise Chinese characters to facilitate learning to read.

China is putting great stress on the physical sciences, but almost entirely on industrial applications rather than on basic research. Until she has caught up industrially she is content to borrow the results of basic research from the more advanced nations. The most productive scientists are still those who were trained in the West, but for the most part even these men are too busy teaching and running institutes to do much original work. Nevertheless the Chinese are making advances in physics, mathematics, and chemistry, though primarily in applied branches. Lack of heavy nuclear research machines in China does not prevent all research in this field, since, as Robert T. Beyer pointed out, there are a number of Chinese physicists at the Nuclear Research Centre at Dubna, near Moscow.

Geology is a branch of science that has grown enormously in Communist China—from 200 active geologists before the Second World War to 21,000 "geological workers" in 1959—as a result of the top priority accorded the search for new mineral deposits on which to base an industrial economy. Most of the "geological workers" are poorly trained by Western standards, many of them in China's twenty-one technical schools of geology. Some, however, are also trained in the East European Communist countries, and apparently under the leadership of a few well-trained geologists, including some Russians, the "geological workers" are able to carry on the extensive prospecting that has shown China to be one of the world's chief reservoirs of raw material, according to Dr. Edward C. T. Chao of the U.S. Geological Survey.

China has vast reserves of coal, now her main source of energy and

power. A great reserve of seven billion tons of iron ore has been found in the Shansi area of Central China. Another deposit of three billion tons, which assays at more than 50 per cent. iron oxide, was found in Honan Province. This is not as high quality ore as the famous Mesabi Range of Minnesota or the "iron mountains" of India, but it is an ample basis for an industrial economy.

Two large deposits of molybdenum are reported, making China's reserves the largest in the world. Copper has been discovered, and a large deposit of ilmenite—ore containing iron and titanium—was found on Hainan Island. The Chinese have reported the discovery of an important deposit of nickel, but this has not been verified. The most promising potential oil fields are in the Tsaidam Basin. There are no known deposits of uranium.

The Chinese policy of "walking on two legs"—using old and outmoded methods and equipment while building up modern techniques and technologies that will replace them—is very apparent in mining, where, although there are a few modern mines using the "continuous miner," conveyor belts, and the like, by far the greater part of the mines are still worked manually, the coal and ore being hauled away over the tiny "indigenous railways."

Building in China is hampered by shortages of lumber and steel (extensive use is made of the fast-growing and plentiful bamboo); but there are a number of notable engineering projects either completed or planned. Completed or in progress are extensive construction of roads and railroads (often using concrete ties for lack of lumber), numerous public buildings, and the great bridge over the Yangtse River at Wuhan, which was first planned in 1913 and was completed in 1958, having taken about two years and four months to build and cost about thirty-five million dollars. A double-deck steel construction 4,465 feet long, it carries a double track railroad on the lower level and vehicle and pedestrian lanes on the upper level.

The greatest engineering projects are two involving the Yangtse River. One is the great Three Gorges Dam between I-ch'ang and Chungking, whose multiple purposes include hydro-electric power, flood control, irrigation, and navigation. The great gorge dam will have a hydro-electric capacity of 13·4 million kilowatts, with secondary dams upstream bringing the total output to 18·25 million kilowatts. The proposed irrigation reservoir will be four kilometres long and 200 metres high, and will have a capacity of sixty million cubic metres.

The other plan is to divert Upper Yangtse water to the Yellow River. Surveys have been undertaken to see how enough of the 9·34 billion cubic metres of the Yangtse's annual flow can be diverted to increase the annual flow of the Yellow River from 0·47 to 2·27 billion cubic metres.

At present north and north-west China, drained by the Yellow River, have 51 per cent. of the cultivated land of China and only 7 per cent. of the surface water flow, while the area south of the Yangtse, with only 33 per cent. of the cultivated land, has over 76 per cent. of the surface water flow.

China has given top priority to all branches of science involving study of and efforts to control forces of nature. The reason is clear when one learns that between 206 B.C. and A.D. 1936 China suffered a total of 1,036 major floods and 1,060 droughts. Not only are the Chinese bringing more and more land under irrigation and making extensive studies of ways to improve water supply, but they have also installed a vast system of weather stations to provide more accurate analyses of China's climatic characteristics. In ten years China's weather observation system has jumped from twentieth place among nations to fourth, and she now rivals Canada for third. Meteorology is an area where concerted effort has been able to produce impressive results, since the equipment needed—rain gauges, thermometers, balloons, radiosondes, river gauges, etc.—is relatively cheap and easy to produce, and the costs involved in operation are not excessive. Hydrology and oceanography are also fruitful areas of exploitation in this great country, with its thousands of lakes, extensive coastline, and vast expanses of shallow seas favourable to abundant marine life.

China's emphasis on industrialisation has had to be adjusted recently because of repeated failures in agricultural production. China is still primarily an agricultural country, but one where farming has always been done on a small scale, and where large-scale techniques seem difficult to apply. Much of the farm land is parcelled out in tiny fields, often extensively terraced, and efforts to use heavy farm machinery, imported or copied from Russia and adapted to her great broad fields like our American plains, were completely unsuccessful. Often too, the commune leaders entered upon projects with more enthusiasm than foresight, mobilising masses of people for such projects as tree planting to reclaim desert areas or blackening the surfaces of glaciers to promote melting, and completely forgetting about such things as weeding the planted fields. Organisation of farm production appears to have been one of the government's greatest weaknesses. Agriculture in China is extremely varied since the country extends over thirty-five degrees of latitude and has great extremes of elevation and precipitation. There is thus a need for careful consideration of local conditions and capabilities, and though advances are being made in such things as fertilisers and plant and animal breeding, still centralised planning of agriculture has yet to prove successful.

In the biological sciences the Chinese have a curiously mixed record. Their achievements in public health have been most impressive, but at the same time they have carried the policy of walking on two legs further in medicine than in any other field, not only using traditional Chinese medicine while modern medicine catches up, but actually promoting it. There are still some 370,000 traditional doctors in China, practising acupuncture (introduction of hot and cold needles of various sizes and lengths into the body at various points), and moxibustion (burning herbs on the skin), and using a vast pharmacopoeia of herbs, some of which may be effective, while others are completely useless. Nor is traditional medicine dying out in China. By the end of 1959 there were 2,000 modern doctors enrolled in thirty full-time classes to study traditional medicine, besides which in 1958 3,200 students were reported graduated from schools of traditional medicine. Whether or not this revival will seriously hamper the progress of medicine in China remains to be seen.

Set against this is the remarkable record of achievement in public health. According to reports, cholera, plague, and smallpox have been eradicated, and typhus, relapsing fever, and other infectious diseases brought under control. Malaria, tuberculosis, and parasitic diseases such as schistosomiasis have been drastically reduced. The Communists went all out to combat the excessive mortality rate of over four million a year due to these and other infectious and parasitic diseases. Sanitation and hygiene seem to have become a passionate cause with the people. Rivers and streams have been drained and irrigation improved. Refuse dumps and stagnant pools have been cleared away and replaced by public parks and recreation areas.

Part of the public health programme is the effective campaign against the "four major pests"—mosquitoes, flies, rats, and grain-eating sparrows. In 1959 the Chinese reported killing over a billion sparrows, one and a half million rats, a hundred million kilograms of flies, and eleven billion kilograms of mosquitoes. (Sparrows have now been taken off the list, since it was found that they ate insects as well as grain. They have been replaced on the list by locusts, long a serious threat to the annual food supply.)

In genetics the Chinese Communists are still devoted to a belief in the inheritance of acquired characteristics, following the Russians Michurin and Lysenko. They maintain that the social environment is the direct cause of evolutionary changes, the adaptations of organisms of one generation being passed along to their offspring. That certain better-adapted organisms do survive and reproduce their kind is the fact to be explained, and Communist doctrine insists that mutation and survival of the fittest are "bourgeois" notions and do not account for it. They seem to be motivated in part by a belief that inherited individual

differences must be suppressed in the interests of bringing about a harmonious Communist state, and also, Dr. C. C. Li surmises, by the curious belief that acknowledgment of inherited differences leads to race prejudice, whereas to a Western geneticist it seems that the recognition of the enormous variety of individual differences cutting across racial lines is one of the best arguments against race prejudice.

The state of genetics is another example of the extent of political interference in the sciences, and the necessity imposed on scientists, especially in the social sciences, to draw pre-ordained and approved conclusions. In spite of this, China recognises that science is essential to the foundation of a modern industrial state, and has given it high priority. With such extensive support from the government for education and applied science, there is no reason to believe that China will fail to push ahead in these areas, and eventually to begin to make contributions to basic research as well.

The Organisation and Development of Science *

By JOHN M. H. LINDBECK

WHEN China's Communists came to power in 1949, they began to outline ambitious plans to thrust China into the company of modern, industrial and scientifically advanced countries. They were not prepared with blueprints for the task which fell to them, for national responsibilities came sooner than they had anticipated. Their appraisal of what steps were required, what priorities to assign, the best allocation of resources at hand and to be developed, and the national goals which might be realistically achieved, took time to determine. After an initial period of consolidation and consideration, they set their course of development in the First and Second Five-Year Plans. These were intended to bring about the modernisation of the world's most populous nation at the fastest possible pace in ways which would not jeopardise the state's political control and ideological commitments.

In January 1956, less than six years ago, the compelling scientific needs of national construction finally led the Central Committee of the Communist Party to call for "a march on science." At the State Supreme Council on January 25, 1956, Mao Tse-tung announced that there should be "a long-range plan for the elimination of backwardness in the economic, scientific and cultural fields." Subsequently the State Council, at the direction of the Central Committee of the Communist Party, established a Planning Committee for Scientific Development, under Marshal Ch'en Yi, to prepare a Twelve-Year Science Plan. In the course of seven months 200 scientists, with the assistance for a period of two months of seventeen Soviet scientists, headed by A. I. Nikhaylov,[1]

* Many scholars and specialists contributed advice and information in the preparation of this article. This help, including that of K. I. Kitagawa of the National Science Foundation, R. N. Ross of the Chinese Science Project in the Libraries of M.I.T., and Lawrence (Hao) Chang of Harvard University, is gratefully acknowledged.

1 *Jen-min Shou-t'se*, 1958, p. 603; I. N. Kiselov, "Scientific Ties Between Two Academies," *Vestnik Akademii Nauk*, S.S.S.R. No. 9, September, 1959, in Joint Publications Research Service (hereafter JPRS): 2139-N (January 13, 1960), p. 5; Kuo Mo-jo, "Development of Scientific Research in China," New China News Agency (hereafter NCNA), June 18, 1956, in *Current Background* (hereafter CB) (Hong Kong: U.S. Consulate-General), No. 400, p. 2.

prepared a draft plan. This was presented to the Eighth Congress of the Chinese Communist Party in September 1956 and endorsed by it on September 27, 1957. It was then sent to the Soviet Union where it was reviewed by 640 Soviet scientists, divided into twenty-six consultative groups. In October 1957 a visiting delegation of 120 Chinese scientists and officials discussed the plan in Moscow and concluded by asking for Soviet co-operation on 100 of the 582 research projects outlined in the plan.[2] Finally, it was forwarded to the National People's Congress for approval. The goal it set for the end of 1967 was "that in those branches of science and technology which are essential to our national economy, we should catch up with the advanced levels in the world."[3] A parallel section of the plan was drawn up for philosophy and the social sciences.[4]

The call for "a march on science" marked a major turning point in the development of science in Communist China. The Academy of Sciences, the main focus of scientific activity, made remarkable growth. Research facilities were expanded and the research staff of the Academy was doubled in one year. Other agencies also benefited in the allocation of funds. From 1955 to 1956 the sums budgeted for science, under the category culture, education and health, underwent over a six-fold increase.

Many factors coalesced to produce this sudden spurt in scientific activity. In general, there was a growing appreciation by the country's rulers that modern industrialism, which they value with determined passion, is the outcome of science. Preparations for the Second Five-Year Plan made the need for a Chinese scientific base evident. Not only engineers, but also scientists in greater numbers were essential if full use was to be made of China's resources. There also was a growing realisation that out of scientific research, new and revolutionary technologies were emerging. Russia's space exploits appear to have made a strong impression on China's leaders. This may have been reinforced by Mao Tse-tung's discussions with Khrushchev and others during his trip to the Soviet Union, November 2-21, 1957, at the time that two major Chinese scientific delegations were conferring about China's Twelve-Year Science Plan with Russian scientists and negotiating for increased scientific and technical co-operation.[5] Moreover, an increase in

[2] *Novoye Vreruya*, Moscow, No. 50, December 12, 1957, p. 12.
[3] Liu Shao-ch'i to the Eighth Party Congress, NCNA, September 16, 1956.
[4] Chou En-lai to the Eighth Party Congress, NCNA, September 18, 1956.
[5] *Jen-min Jih-pao* (*People's Daily*), Peking, November 2, 1957.

China's dependence on other countries for scientific assistance was neither satisfactory nor feasible. Russia had provided the scientific skills and support during the First Five-Year Plan, but could not be expected to meet China's growing needs during future and larger plans. Finally, inferiority in science touched Chinese national pride and ambitions. Seeking great power status, China's leaders expressed determination to match the scientific performance of modern and great powers.

Whatever the reasons for Communist China's increased attention to science, the present scope of Chinese activities requires examination and appraisal of both its potential contributions to science and its international implications. A survey of the general pattern of organisation and trends in the development of science in China will assist analysis. What resources did the Chinese Communists have when they began their "march on science"? How were these resources used? How were scientific capacities developed? What were some of the critical problems? What policies were adopted to promote science? How has research been organised? Answers to many of these questions can only be approximate with publicly available information. Secrecy, which has drawn sharp protests from some of China's scientists, restrictions on international communications, also a cause of complaint by Chinese scientists,[6] and a welter of conflicting claims and statistics obscure many features of the situation. Nonetheless, the main developments seem to be plain.

Availability and Use of Resources, 1949–56

When the Chinese Communists took major steps to develop science in China, they started with resources inherited from decades of earlier scientific activity and development. These remained basically unchanged before 1956.

Ten years ago China already possessed a small corps of college graduates trained in various scientific and technical fields. Among college graduates there were very roughly 10,000 who had degrees in the natural sciences, 25,000 in engineering, 10,000 in agriculture, 7,000 in medicine

[6] Some of these complaints were voiced in a memorandum published by a group of scientists in *Kuang-ming Jih-pao*, June 7, 1957; also see *Opposition Aroused in China by Marxist Planning of Scientific Research* (Oxford: Society for Freedom in Science), Occasional Pamphlet No. 19, December 1959; *Scientia Sinica* (*Chung-kuo K'o-hsueh*), Vol. VIII, No. 10, 1959, p. 1159. Part of the problem was the overzealous interpretation and application by Chinese Communist officials of Article 8 of the "Provisional Regulations Governing the Control of Book and Periodical Publishing, Printing, and Distribution Trades" (promulgated August 16, 1952) which stipulated that publishers "shall not publish words or charts that disclose state secrets." All research, of course, is state business.

and health, and 60,000 in law and the social sciences.[7] Those with advanced post-graduate degrees were the significant group for scientific progress, both in terms of conducting research and for training new scientists. Since graduate work was nearly non-existent in China, this group was composed almost entirely of those who had studied abroad. In all fields combined, of those who received one or more advanced degrees before 1949, perhaps 2,000 to 3,000 were on the mainland of China in 1950.[8]

In May 1950 the roster of Chinese natural scientists totalled 862 names, of which 174, or 20 per cent., were outside the country. Some 225 of these natural scientists were reported to be engaged principally in research before the Communists came to power.[9] A number of these men fled from China with the Communist take-over, but the majority remained.[10] Almost the entire roster of the 190 physical and natural scientists who at present are members of the Department Committees of the Chinese Academy of Sciences is made up of the men who were leaders in science and rising research scientists before 1949. About 150 of them are known to have received training abroad, eighty of them in the United States and most of the remainder in Europe and Japan. These men, many of them former members of the Academia Sinica under the Republic, are Chinese equivalents to Soviet Academicians.

Before 1949 most of China's basic research was carried on in twenty-one research institutes under two national academies: The Academia Sinica (established in 1928) with thirteen institutes and the National Academy of Peking (established in 1929) with eight institutes. Altogether seventeen of these institutes were concerned with mathematics, physical and life sciences. In addition, the National Geological Survey of China (established in 1916) had eight research laboratories with thirty senior scientists and about 200 technical specialists. Various government ministries had others. Thus the military establishment operated the

7 These are crude projections from figures on college graduates presented in *Chung-kuo Chiao-yü Nien-chien* (*Chinese Yearbook of Education*) (Shanghai: 1948). Anderson Shih, Director of Union Research Institute, Hong Kong, in "The Comparative Status of Science and Education between Communist China and USSR" (paper read at the Third International Sovietological Conference, September 18–24, 1960, Lake Kawaguchi, Japan), p. 11, estimates that some 20,000 scientists and technicians were scattered over China in 1949.

8 Leo A. Orleans, *Professional Manpower and Education in Communist China* (Washington: National Science Foundation, 1961), p. 77.

9 Kuo Mo-jo, "General Report on 1950 Work and Main Points of 1951 Programme of the Chinese Academy of Sciences," *Hsin Hua Yueh-pao*, May 1951, in CB 153, pp. 4–11; *K'o-hsueh T'ung-pao*, No. 19, 1959, p. 613.

10 Anderson Shih, *loc. cit.*, p. 2. Shih reports that over 90 per cent. of China's professors and scientists had been approached and urged to remain at their posts before the Communists established their government.

Air Force Research Bureau, the Central Ordnance Research Institute, and the Army Medical Research Institute. Under the Ministry of Health there was a National Institute of Medical Research with fifteen departments. The Ministry of Economics operated the Huanghai Industrial Research Institute and the National Industrial Research Bureau with seventeen departments. The Ministry of Agriculture had a research bureau with twelve departments. The Ministry of Education supported a variety of university research departments, the National Institute of Compilation and Translation, scientific equipment production plants and a number of provincial science institutes. Finally, a number of industrial plants carried on some engineering research.[11]

During the early period of Communist control, the country's scientific resources were under-utilised, or diverted to other purposes. "The most advanced form of all-out technological assistance" from the Soviet Union admittedly provided the specialised skills needed for "the overwhelming majority of the important industrial and technical facilities developed during the First Five-Year Plan." While the educational system was recast and expanded to emphasise science, technology and engineering, and to produce hastily trained technical staffs for the new industrial plants and modern facilities introduced by the Russians, the existing research institutes, industrial laboratories and government research organisations merely underwent reshuffling, rehabilitation and minor expansion.[12]

From the Communist viewpoint there was, in fact, little need for change in the function and organisation of science as it existed in 1949. On some points there were strong similarities in the outlook and policies of Nationalists and Communists. Both looked on science as a tool with which to develop China's resources and national strength:

> To be able to shoulder the heavy responsibility of reviving our nation and completing our revolution, we must have at all costs a clear idea of the content and meaning of science; we must propagate the spirit of science and we must utilise the methods of science; so that one man will be as efficient as ten, and in one day ten days' work will be done.[13]

This passage from a wartime directive by Chiang Kai-shek finds

[11] Joseph Needham and Dorothy Needham, *Science Outpost: Papers of The Sino-British Science Co-operation Office, 1942–46* (London: 1948). Chart opposite p. 32 and *passim*; *The China Yearbook, 1931*, Shanghai, pp. 454 *et seq.*; *China Handbook, 1937–45*, New York, pp. 350 *et seq.*; *China Handbook, 1950*, New York, pp. 657 *et seq.*

[12] Nieh Jung-chen, "China's Programme in Science and Technology," *Jen-min Jih-pao*, September 27, 1959, in CB 608, pp. 1–11.

[13] Chiang Kai-shek, "The Way and Spirit of Science," in Needham, *op. cit.*, p. 79. Also see Chow Tse-tsung, *The May Fourth Movement* (Cambridge: Harvard University, 1960), pp. 344–345.

echoes in Communist statements and the provisions of the Common Programme promulgated by the Communist authorities in September 1949: "Efforts shall be made to develop the natural sciences in order to serve industrial, agricultural and national defence construction." Both the Nationalists and the Communists were equally interested in applied science and technology. The Communists at first merely sought to improve on existing research priorities and organisational patterns. They seemed to have been less concerned about science during this period than the politics of scientists and the "rehabilitation of ideology."

Nor was the imposition of central governmental control a major problem in the transition from one government to the next. Most of China's science was already under government agencies and direction. This was true of the national academies established in the first years of Nationalist rule. Subsequently, wartime mobilisation of national resources and the development of government research agencies, both industrial and academic, enlarged the government's place in science. Thus one authority replaced another when the Communists took over the country. Only a few university research programmes and industrial scientific laboratories and programmes remained to be brought under governmental management.

The Communist leaders were intent, however, on establishing firm control over existing institutions. On coming to power, the Chinese Communists took over and reorganised research centres, took active steps to mobilise scientists in support of the régime and developed a mass information programme for the popularisation of science.

Immediately following the establishment of the new régime in October 1949, Ch'en Po-ta, deputy chief of the Communist Party Propaganda Department and vice-president of the Marx-Lenin Institute, made a quick trip to the Soviet Union to consult with S. I. Vavilov, the President of the Soviet Academy of Sciences. In discussing the problems facing China in the field of science, Ch'en in particular explored the role and organisation of the Soviet Academy of Sciences, the Russian system for planning scientific research and the connection between science and technology.[14] Following Ch'en's return to China, the State Administrative Council at its second meeting on October 25 ordered the establishment, on November 1, 1949, of a Chinese Academy of Sciences directly under the jurisdiction of the Central People's Government,[15] "to direct and promote the development of science in China."

[14] I. N. Kiselov, *loc. cit.*, p. 2.
[15] *China Digest*, VII, No. 4, November 16, 1949, p. 23.

Kuo Mo-jo, a literary and cultural figure who was to become a notable spokesman for the new régime, upon his appointment as President of the new Academy, promptly went to the Soviet Union in November for further information and discussion about scientific organisation. Following his trip, Vavilov's book, *Thirty Years of Soviet Science*, was translated into Chinese to serve as a guide, along with Stalin's *Marxism and Problems of Linguistics*, for the organisation of the natural sciences in China.[16]

The Communist Party, of course, already had made preparations to bring scientists within its network of mass organisations. Plans for this were laid at a meeting convened in Peking during July 1949 where it projected an All-China Conference of Scientific Workers.[17] This conference, with about 470 participants meeting in Peking on August 18-24, 1950, formally established two key organisations. One was an All-China Federation of Natural Science Societies with "the aim of rallying all the scientific societies and organising all the scientific workers so as to carry out scientific research work for the improvement of production technique, and thus to promote New Democratic economic and cultural construction."[18] The other was the All-China Association for the Dissemination of Scientific and Technical Knowledge designed to assist the government popularise science.[19]

In terms of research, the Academy of Science was the significant body during this period. Until 1956 it was the agency of the government charged with official responsibility for national co-ordination and administration of research and, through its institutes, the main agency for research activities.[20] Its initial tasks were to (1) reorganise and consolidate the research institutes of the country; (2) provide for a continuation of research activities and plans, relating them to requirements in industry, education and national construction; (3) compile a national

[16] Ch'ien San-ch'iang, "Modern Science in China," *Kuang-ming Jih-pao*, July 21, 1953, in CB 257, p. 5.

[17] Coching Chu, "Science in New China," *Culture and Education in New China* (Peking: Foreign Languages Press, n.d.), p. 69.

[18] *Jen-min Shou-ts'e 1953* (Tientsin: *Ta Kung Pao*), in CB 257, p. 8.

[19] *Ibid.* p. 29. The purposes of this organisation are thus described: "The activities of the Association are directed toward the workers, peasants and soldiers, and its aims are: (1) to enable the labouring people to master a scientific knowledge of production so as to give full play to their powers in national economic construction; (2) to explain all natural phenomena from the materialistic viewpoint so as to get rid of superstitious notions; (3) to extol our accomplishments in scientific technique and the inventions resulting from the creative efforts of the labouring people so as to promote the people's patriotic spirit; and (4) to popularise medical and health knowledge so as to safeguard the people's state of health."

[20] T'ao Meng-ho, "China's New Academia Sinica," *China Monthly Review*, November 1957, in CB 153, p. 21.

roster of scientists and work out assignments for them on a planned basis; (4) develop plans to increase China's scientific manpower in co-operation with the universities through training programmes, foreign education, and recruitment of Chinese scientists abroad; and (5) educate research workers in Marxist-Leninism.[21]

From 1949 to 1953, the Academy rehabilitated and reconstructed scientific activities more or less along pre-existing lines. With the formulation of the First Five-Year Plan (1953–1957), the Academy was reorganised with Russian assistance, slowly enlarged and expected to play a key role in the allocation of scientific resources.[22] However, very little was achieved. In short, as the Communist authorities in China have stated, " the scientific and technological work carried out during this period was rather scattered, and less research work of a creative nature was carried out." [23] The new Communist leadership in China, in effect, at first left science to the scientists. The scientists, however, were given little time for science, for they were mobilised for the Korean War effort and put through programmes of political indoctrination.

Expansion of Scientific Facilities

Once the decision to expand scientific work was made, the Chinese Communist authorities acted forcefully. Funds budgeted for science within the allocations to culture, education and health rose from about $15 million in 1955 to just short of $100 million in 1956. Since then the budget for science has represented about one per cent. of the total national budget. In 1960 this amounted to about $440 million, calculated on the basis of non-official exchange rates. While most of the increase seems to have been in support of industrial research and technological development, the budget of the Academy of Sciences was increased almost three-fold between 1953 and 1957, rising to almost $37 million. In 1956 and 1957 the Chinese Communists report that they spent over $9 million in British sterling to purchase scientific literature from non-Communist countries. The rapid rise in expenditures for science is clear from the following table:

[21] Kuo Mo-jo, " General Report on 1950 Work and 1951 Programme of the Chinese Academy of Sciences," *Hsin Hua Yueh-pao*, May 1951, in CB 153, pp. 4–11.

[22] Russian advisers, about a dozen in number, introduced an additional organisational level in the Academy by grouping the research institutes within four, later five, departments. The Academy adopted Soviet administrative practices, probably including accounting and reporting procedures and systems of internal communications. It followed Russian advice in the consolidation and redistribution of research projects, and, in principle, accepted the Russian reward and status system of Academicians.

[23] Nieh Jung-chen, *loc. cit.*, p. 4.

TABLE I

Budgeted Expenditures for Science

Units: thousand dollars
(thousand yuan)

YEAR	Total Science-Budget (a)	National Budget (b) (per cent.)	Academy of Science	Science Budget (per cent.)	Research in Educational Institutions(c)	Science Budget (per cent.)	Imports of Scientific Literature from non-Communist countries(d)
1950	408		1,224(c)				
	(1,000)	0·015	(3,000)	—	—	—	—
1951	3,212						
	(7,870)	0·07	—	—	—	—	—
1952	4,628						
	(11,340)	0·07	—	—	—	—	—
1953	13,000		13,000(c)	100·0	—	—	—
	(31,900)	0·15	(31,900)				
1954	13,836						
	(33,890)	0·14	—	—	—	—	—
1955	15,410				300(c)		
	(38,000)	0·14	—	—	(740)	·019	—
1956	99,590		27,800(d)	27·0	2,440(c)	·024	5,040
	(244,000)	0·8	(66,740)		(6,000)		(11,800)
1957	119,600		36,735(e)	27·5	4,166(d)	·04	4,200
	(293,000)(f)	1·0	(90,000)		(10,000)		(11,500)
1958	156,734(f)		—	—	—	—	—
	(384,000)	0·9					
1959	334,700						
	(820,000)	1·57	—	—	—	—	—
1960	441,224(g)						
	(1,081,000)	1·54	—	—	—	—	—

2·45 Yuan=$1·00 (h)

Notes

(a) Helen and Yi-Chan Yin, *Economic Statistics of Mainland China (1949–57)* (Cambridge; Harvard Center for East Asian Studies, 1960), p. 92.

(b) Sources: State Statistical Bureau, *Ten Great Years: Statistics of the Economic and Cultural Achievements of the People's Republic of China* (Peking: Foreign Languages Press, 1960), p. 23; Tseng Shan, "Report on Examination of the Final State Accounts and the Draft 1960 State Budget," NCNA, April 10, 1960, in *Survey of the China Mainland Press* (hereafter SCMP) (Hong Kong: U.S. Consulate-General), 2240, pp. 3–6.

(c) Approximate figures calculated from indices given by Kuo Mo-jo, *Jen-min Jih-pao*, July 6, 1957, in CB 467, pp. 8, 9.

(d) Kuo Mo-jo, *ibid.*

(e) NCNA, June 4, 1957.

(f) Li Hsien-nien, budget speech, *Jen-min Jih-pao*, Feb. 12, 1958, p. 3.

(g) *Fianay SSSR*, Moscow, No. 9, September, 1960, p. 92.

(h) These conversions are based on unofficial exchange rates with non-*bloc* countries, but it may be noted that in October 1960, 1 yuan equalled 1 rouble in Chinese transactions within the Sino-Soviet *bloc* and 4 roubles equalled U.S. $1.00 at the official rate of exchange. Using this rate, the dollar figure for the 1960 budget for science, is reduced from $441,224,000 to $270,250,000, but its percentage of the national budget is unaffected.

A large proportion of the increase in the science budget has gone into buildings, especially at Peking and such new centres as Sian and Lanchow. In some cases, these buildings were criticised as extravagant and the costs of construction were far above official building standards.[24] The development of new research centres in the past two years may have absorbed much of the recent increase in budget allocations. Near Peking at Chung kuan-ts'un a new national centre for education and science is being built to accommodate, when completed, a hundred thousand students and scientists. However, the competition for materials and equipment in short supply, probably also for qualified people, apparently has prevented scientific bodies from expanding as rapidly as planned. For a number of years, more funds were budgeted for science than were spent.[25] Yet the number of centres and the amount of suitable space for scientific research have been vastly improved. Comparable improvements have also been made in other respects.

Although still dependent upon Soviet and Eastern European sources for many complex instruments, China has rapidly increased her production of scientific apparatus both for teaching and research purposes. Most institutes also seem to have some shop facilities for building research equipment. Within the Academy of Sciences special responsibility for instrument development is lodged with the Institute of Optical and Precision Instruments at Ch'ang-ch'un. Under the First Ministry of Machine Building, the Shanghai Scientific and Technical Instrument Research Institute and its attached General Instruments Factory is a major producer of scientific and technical equipment. In addition, there are a number of other industrial plants making scientific instruments, such as the Nanking Scientific Instrument Plant, the T'ung-chi Instrument Plant in Canton, the Pu Fah Scientific Apparatus Plant and the Ta Hua Electric Instrument Plant in Shanghai and the State Electronic Tube Plant in Peking.[26] In 1958 the State Scientific and Technological Commission decided to establish regional scientific supply centres in Tientsin, Peking, Shenyang, Shanghai, Canton and Wuhan.[27] This tremendous effort to develop production of scientific and industrial equipment may be partly due to a desire to save foreign exchange in view of the high cost of foreign equipment.[28]

The need for scientific literature has been met by major acquisitions of Soviet and Western journals and books. In 1958, the Chinese

[24] Li Hsien-nien to the National People's Congress (hereafter NPC), NCNA, July 8, 1955.
[25] Kuo Mo-jo to the NPC, NCNA, June 18, 1956, in CB 400, pp. 1–5.
[26] *China Reconstructs*, March 1956, p. 19; *Kuang-ming Jih-pao*, January 31, 1958, p. 1; *Far Eastern Economic Review*, Hong Kong, July 6, 1956; J. Tuzo Wilson, *One Chinese Moon*, (Toronto, New York, London: 1959), p. 78 *passim*.
[27] NCNA, January 26, 1958.
[28] Li Fu-ch'un to the NPC, May 23, 1957.

Academy of Sciences received from its Soviet counterpart 46,132 titles in exchange for 29,831. The Soviet All-Union Institute of Scientific and Technical Information (VINITTI) sent China thirteen series of its *Reference Journal*, forty-eight series of its *Express Information*, the *Bulletin of Technical Economic Information*, reviews, pamphlets, etc. In 1958 the Institute also sent 400,000 bibliographical cards on materials which it was processing.[29] A strenuous effort to secure Western scientific books and periodicals, both back and current publications, led to purchases in pounds sterling of over $5 million in 1956 and $4 million in 1957—sums claimed to be larger than spent for the same purpose by the Soviet Union, as well as Japan and India, during these years.[30] Major responsibility for acquisitions falls on the Institute of Scientific and Technological Information, which apparently was separated from the Academy in 1959 and made a separate agency under the Scientific and Technological Commission. It now publishes eighty-nine periodicals and has arranged exchange of scientific information with most countries in the world.

Although there still is "a scarcity of materials from foreign countries" in some fields,[31] the general library facilities have been reported to be fairly adequate.[32] The Library of the Academy of Sciences, which in 1957 had 2·5 million volumes in its various branches and institutes, has been expanded and stocked with much current literature from abroad, including the United States. It now claims to have over six million titles and exchange arrangements with 1,290 institutes in fifty-six countries.[33]

For the past few years the Chinese have also had access to the research facilities of other Communist countries, notably at the nuclear research centre at Dubna, near Moscow, where as early as 1957 eleven Chinese scientists were working.[34] Benefits in research facilities, as well as scientific personnel, also accrue to the Chinese from the joint research projects which they have undertaken with the Soviet Union. In addition to earlier contracts, a master agreement providing for such co-operation for a five-year period, 1958–62, was signed on December 11, 1957.[35] One major project, the survey of the Heilungkiang river basin, in which 300 Chinese scientific workers and 130 Soviet scientists from the Russian

[29] I. N. Kiselov, *loc. cit.*, pp. 6, 7.
[30] Kuo Mo-jo to the NPC, *Jen-min Jih-pao*, July 6, 1957, in CB 467, p. 9.
[31] *Scientia Sinica*, VIII, No. 10, 1959, p. 1158.
[32] Kuo Mo-jo to NPC, *Jen-min Jih-pao*, July 6, 1957, in CB 467, p. 9; Wilson, *op. cit.*, *passim*.
[33] Chang-tu Hu *et al.*, *China: Its People, Its Society, Its Culture* (New Haven: 1960), p. 450; *Scientia Sinica*, Vol. VIII, No. 11, in *Science News Letter*, Washington, D.C., December 10, 1960, p. 387.
[34] *K'o-hsueh*, XXXIII, No. 2, 1957.
[35] *K'o-hsueh T'ung-pao*, No. 6, 1958, p. 165.

Academy of Sciences took part, was completed in early 1960 after three years of work.[36]

Since 1957 the Chinese have acquired some very modern and advanced research equipment and facilities. The Russians provided the Institute of Atomic Energy at Peking with a nuclear research reactor, put into operation on September 27, 1958, a cyclotron and another type of accelerator.[37] The Chinese themselves have built a high tension multiplier and several small accelerators. They are now building electronic digital computers, automatic swing curve computers, radio telescopes and other delicate and complex equipment.[38]

Most scientific research is concentrated in institutes. In general, the institutes of the Academy of Sciences concentrate on most of the work in basic science and on more difficult and fundamental problems. Their resources too, however, are primarily committed to investigating applied rather than theoretical problems. The major emphasis now is on the research institutes connected with industry and communications, reported in 1958 to be 415 in number with 14,700 research and technical personnel.[39] The growth of research facilities is summarised in the table overleaf. Statistics for research centres outside of the Academy are scanty up to 1958 and after this date are not included here because, with the Great Leap Forward, they lack definition which permits comparison with the institutes of the Academy of Sciences.

In terms of scientific resources, mainland China now has the institutional basis for advanced scientific research in several fields. Rapid progress is being made in extending and raising general scientific and technological levels of research in industry, agriculture and health, but advanced scientific achievement on a broad scale appears to be impeded by one major deficiency: the supply of highly trained scientists. This is illustrated in the Academy of Sciences which has more research centres than the Soviet Academy of Sciences, but far fewer research scientists. In 1959 the Chinese Academy had 105 research institutes to Russia's eighty-seven, but only 7,000 members on its research staff compared to Russia's 14,000.[40]

[36] *Kuang-ming Jih-pao*, December 1, 1959, p. 1, in JPRS: 3132 (April 1, 1960), pp. 12, 13.

[37] For a review of the Chinese capabilities in the nuclear field, see A. Doak Barnett, "The Inclusion of Communist China in an Arms-Control Programme," *Daedalus* (Proceedings of the American Academy of Arts and Sciences, Vol. 88, No. 4), Fall 1960, pp. 831–845.

[38] NCNA, September 15, 1959, and September 28, 1959; *Druzhba, Peking*, November 12, 1958, p. 28 and February 4 1959, p. 9.

[39] State Statistical Bureau, *Ten Great Years: Statistics of the Economic and Cultural Achievements of the People's Republic of China* (Peking: Foreign Languages Press, 1960), p. 203.

[40] Figures on the Soviet Academy as reported in the *New York Times*, July 23, 1959.

TABLE II

Growth of Scientific Research Institutes and Personnel
(1949—1959)

YEAR	ACADEMY OF SCIENCES							OTHER	
		Research Staff							
	Research Institute	Senior	Associate	Assistant and Technical	Student	Total Research Staff	*Total Employees*	*Research Departments and Institutes*	*Research Staff*
1949	14(a)	224(b)	—	—	—	660(c)	—	110(a)	—
1950	17(d)	—	—	—	—	—	—	—	—
1951	e)	—	—	—	30(c)	—	—	—	—
1952(f)	25(g)	317		661	—	1,292	5,239	—	—
1953(h)	25	347			1,378	1,725	—	20(i)	1,000(i)
1954(j)	41	350		—	—	—	—	58	—
1955(k)	47	428	421		1,634	2,483	—	60	3,940
1956(l)	66	—	—	—	320(m)	4,475	—	105	10,307
1957(n)	68	746	725	4,005	340(m)	5,506	17,336	(o)	—
1958	90	—	—	—	1,600(p)	—	—	—	—
1959	105(q)	(800)	(800)	—	1,900(p)	7,000(q)	40,000(q)	—	—

Notes

(a) Kuo Mo-jo reported on June 17, 1950, that the Academy had fourteen institutes, one observatory, and one industrial research unit. He said that there also were ninety-three natural science institutions, seventeen scientific institutes and twenty-nine factories making scientific appliances in China.—*Culture and Education in China*, (Peking: Foreign Languages Press, n.d.), p. 8.

(b) *K'o-hsueh T'ung-pao*, No. 19, October 11, 1959, p. 613. Chu K'o-chen put the figure of research institutes in China in 1949 at 270.—*Nauka I Zhizn'*, Moscow, XXVI, No. 9, September 1959, in JPRS 3283 (May 19, 1960), p. 2.

(c) Coching Chu, "Scientific Research and University Education," *Ta Kung Pao*, October 29, 1950, in CB 153, pp. 32–36.

(d) Ch'ien San-ch'iang, "Modern Science in China," *Kuang-ming Jih-pao*, July 21, 1953, in CB 257, pp. 1–5. This includes the Tsu-chin-shan Observatory.

(e) Li Ssu-kuang, "Science Serves the People," *People's China*, August 16, 1951 (in CB 153, pp. 12–20). Three of the bodies listed were not institutes. Li said that before 1949 there were about 190 research centres and programmes in China: thirty-two in engineering and technology, 112 in agriculture, seventeen in geology and eleven in medicine and pharmacology.

(f) *Peking Review*, No. 5, April 1, 1958, p. 12; *Jen-min Shou-ts'e*, 1958, p. 597, for all except research institutes.

(g) Ch'ien San-ch'iang, *loc. cit.* He includes the Tsu-chin-shan Observatory, and states there were twenty-eight institutes in 1952, but his list shows only twenty-five.

(h) Anderson Shih, *op. cit.*, p. 16; Kuo Mo-jo, "Report Concerning the Basic Conditions of the Chinese Academy of Sciences and Its Future Work," *Jen-min Jih-pao*, March 26, 1954 in CB 359 pp. 15–22. In addition to twenty-five research institutes Kuo lists four independent research rooms, four preparatory offices for research institutes, one observatory, one scientific instrument collection and one custodial committee for bacteriological specimens.

(i) Ch'ien San-ch'iang, *loc. cit.*

(j) Kuo Mo-jo, in Report to National People's Congress, NCNA, Peking, July 21, 1955, CB 351, p. 21; NCNA, Peking, April 29, 1955, SCMP No. 1038 p. 17.

(k) Anderson Shih, *op. cit.*, p. 16; *Drushba*, Peking, March 27, 1956, p. 2. Also *K'o-hsueh T'ung-pao*, 1955, No. 11, and SCMP 1061, p. 27.

(l) Po I-po to the National People's Congress, NCNA, Peking, July 1, 1957, on figures for 1956, except for students.

(m) *Ragvitiye Ekonomiki Stran Narodny Demokratii*, (Moscow: 1958), p. 223.

(n) *Jen-min Jih-pao*, January 3, 1958; *Peking Review*, No. 5, April 1, 1958, p. 12, for 1957 figures with two exceptions.
(o) The State Statistical Bureau is said to have reported "over 500 scientific research institutes with more than 20,000 research workers," in 1957. Peking Radio Broadcast, April 13, 1959.
(p) These are enrolment figures for students at the Academy's universities.
(q) *K'o-hsueh T'ung-pao*, 1959, No. 19, pp. 613, 614.

Shortage of Scientists

The men and institutions inherited from the previous era provided a base on which the Chinese Communists could build during the past ten years, but these were not adequate for the ambitious programmes being launched. To meet the shortage of first-rate scientists, the Communists have taken three measures to expand their number: inducing Chinese scientists abroad to return; sending students to the Soviet Union and Eastern Europe for advanced training; and developing a programme of graduate training in China.

Although over 1,500 students who were studying abroad returned to the China mainland by the end of 1952,[41] the Chinese estimated in 1958 that about 10,000 Chinese scientists and students still remained in the United States, England, France and Japan. Persuading these people to return, they saw as "one of the most important methods" of meeting their immediate needs for trained manpower.[42] A few hundred returned between 1952 and 1958, principally from the United States; very few have done so since 1958. However, among those who returned prior to 1958 were one or two hundred men who constitute a significant portion of the total number of capable scientists available to the régime.

As a second step, the Chinese Communists sent students abroad for advanced training. Thus far these students have proved to be Communist China's main source of young scientists with post-graduate training. By May 1957, 7,075 Chinese students—a good deal fewer than the 10,000 called for in the First Five-Year Plan—had been sent to fourteen countries for study. Of these, 1,331 went for post-graduate training.[43] Most of the students went to the Soviet Union, 6,572 by the end of 1958.[44] Of those studying in Russia, 300 completed their training and returned to China in 1956; 351 in 1957; 600 were scheduled to return in 1958; and about 1,200 in 1959—making a total of 2,400. In 1960 another 1,300 students returned from Russia and other Socialist countries after completing from two to five years of study.[45]

41 *China Handbook, 1953–54*, (Taipei: 1953), p. 409.
42 Tseng Wen-ching, *The Socialist Industrialisation of China*, 1959, in JPRS: 3800 (August 31, 1960), p. 113.
43 *Druzhba*, Peking, May 30, 1957.
44 *Hua Ch'iao Jih-pao*, New York, February 17, 1959.
45 NCNA, July 18, 1957; NCNA, February 14, 1959, June 27, 1959, and July 16, 1960; *Druzhba*, November 5, 1957, p. 21.

The 3,700 students who have returned to China after their study abroad include those who had done post-graduate work. How many is uncertain. Less than 20 per cent. of the students sent abroad during the First Five-Year Plan were post-graduate students; about 40 per cent. (139) of the students returning from the Soviet Union in 1957 were reported to have been in post-graduate studies. Perhaps altogether 1,200 to 1,500 have received advanced degrees, most of these in engineering and fields of applied science, but very few—possibly only a couple of hundred—in the basic physical and natural sciences.[46] Almost all have been assigned upon their return to the Academy of Sciences, to scientific and technological institutes of the various ministries and bureaux, and to universities as teachers.[47]

Additionally, several hundred Chinese scientists, advanced students and technicians with research potentialities had their qualifications upgraded by going to the Soviet Union for periods of study and training in research. Beginning in 1953, several hundred Chinese scientists have visited the Soviet Union for varying periods to observe Russian research and for short-term research experience and training. Part of this programme was specifically designed to strengthen the Academy of Sciences. According to a Russian report, "From 1956 on, the institutes of the Academy of Sciences USSR began to enrol, at the request of the Academy of Sciences of the Chinese People's Republic, Chinese aspirants and operators [*i.e.*, students seeking degrees and those receiving formal research experience]; for instance, during 1958, 300 Chinese specialists received training in practice and instruction in the system of the Academy of Sciences USSR."[48]

China's need for scientists will finally have to be met through her own educational and training programmes. The leaders of the Academy of Sciences certainly recognise this. The President of the Academy, Kuo Mo-jo, in a speech to the National People's Congress in 1955 noting that the country's progress had been made possible by Soviet scientists and specialists, argued that China could not continue to depend on the Soviet Union for scientists and needed "a strong army of scientists" of its own. He warned that without this, it was hard to imagine how the plans for building Socialism and Communism could succeed.[49] Nieh Jung-chen, the chairman of the Scientific and Technological Commission, put the matter succinctly in 1958 when he said: "It is obvious that if we cannot conduct our research independently and creatively, if we cannot fight

[46] Science is not listed among the subjects of specialisation of the 1,300 students who returned to China in 1960.

[47] Tseng Wen-ching, *op. cit.*, p. 118.

[48] I. N. Kiselov. *loc. cit.*, p. 6.

[49] NCNA, July 21, 1955, in CB 351, pp. 20–24.

for our own rejuvenation, it will be eternally impossible for us to catch up with the advanced scientific level of the world." [50] The Twelve-Year Science Plan called for the training of 10,500 graduate students by the end of 1967, but there are those who are now urging that the figure at least be doubled.[51]

In fact, very little has been accomplished. The Academy of Sciences undertook to develop a graduate training programme in 1955, but the poor and uneven preparation of the students in advanced fields of science presented problems which could only be solved at earlier stages in education. Moreover, many of the best students were sent to the Soviet Union. In order to prepare a select group of undergraduates for advanced work and to develop a sound programme of graduate study and research training, the Academy recently has established two educational institutions of its own in co-operation with the Ministry of Higher Education. One is the University of Science and Technology at Peking which opened in the fall of 1958 with an enrolment of 1,600 students. The other was organised by the institutes of the Shanghai Branch of the Academy in 1959 with an initial enrolment of 300 students.[52]

Some post-graduate work has been attempted in senior universities and technical colleges. By the end of 1956, 4,841 students had been accepted for elementary graduate training, mostly for two-year periods and primarily in preparation for teaching.[53] The Ministry of Higher Education announced in July 1956 that educational institutions would admit 1,015 for more intensive graduate training, covering a four-year course. Rigorous graduate standards were finally introduced in September 1957, when the Ministry of Higher Education announced post-graduate openings: 161 at universities; sixty-five at institutes of technology; sixty-four at colleges of agriculture and forestry; five at the English Department of the Peking Foreign Languages School, and fifty-three others.[54]

The shortage of senior scientists is likely to persist for a long time, well beyond 1967. Among graduate students, a relatively small proportion appear to be concentrated in the basic sciences, partly because the need for engineers and technicians to meet the goals of the five-year plans has higher priority and also because only a limited number of first-rate scientists can be spared for education, full- or part-time, from the research projects pressed upon them. Despite demands of party

[50] Nieh Jung-chen, "The Road of Development of Our Country's Scientific and Technical Work," *Hung Ch'i* (Red Flag), No. 9, October 1, 1958, in Union Research Service (URS), Vol. 13 No. 19, pp. 278–279.
[51] Tseng Wen-ching, *op. cit.*, p. 113.
[52] NCNA, September 20, 1958; *Druzhba*, October 15, 1958, p. 29; NCNA, Peking, June 18, 1959.
[53] *Narodnyy Kitay*, Peking, No. 16 (August 16, 1957), p. 20.
[54] *Kuang-ming Jih-pao*, August 9, 1957, in SCMP 1626, p. 2; *Ibid.* September 13, 1957.

enthusiasts and the urgent requirements of state planners, only a few students can be trained at one time, as the President of the Academy of Sciences pointed out in 1955 to the National People's Congress: "The idea of mass production cannot be entertained." He also emphasised that the process of training could not be speeded up: "Generally speaking, a university graduate is required to take from five to ten years of post-graduate research work without a break in order to become a more advanced scientist." His hope was that during the Second or Third Five-Year Plan, the small number of those being trained in the Academy would be able to make their contribution to national construction.[55] In the sciences, as distinct from engineering, it is not likely that by 1960 more than a couple of hundred students had completed their training in China itself for the equivalent of a doctoral degree.

The shortage of research personnel for the new facilities which were being built and for work in priority fields was so severe that Kuo Mo-jo, on returning from a trip to the Soviet Union in early 1958, proposed that: (1) some scientists in allied fields be diverted to work in areas where shortages of scientists were most acute; (2) the Russian system of using students for research should be adopted; and (3) that able secondary school students should be recruited and given intensive short-term training to prepare them for work in the research projects of the Academy.[56] Thus the shortage is not only at the upper levels, but also extends throughout the entire research establishment.

The most critical shortage, however, appears to be in the higher ranks. How many scientists are there in China with the ability and training to conduct advanced research? Precise information for answering this question is not available. Any estimate may need radical revision. In mathematics, there are less than 400 scientists engaged in research.[57] In the natural sciences, there probably are not over 1,200 scientists with advanced degrees, or their equivalent, actively engaged, full- or part-time, in research.[58] Of these, half or more are connected with the Academy of Sciences. Most of the remainder are associated with industrial research institutes and the science departments of the

[55] Kuo Mo-jo to the NPC, July 21, 1955, in CB 351, pp. 20–24.

[56] *K'o-hsueh T'ung-pao*, No. 7, 1958, p. 198.

[57] According to *K'o-hsueh T'ung-pao*, No. 18, 1959, p. 1, 342 mathematicians published 983 papers between 1950 and 1958.

[58] This figure, subject to radical revision. is arrived at as follows: 862 names on the 1950 roster of natural scientists, less 174 abroad, equals 688; 200 completed training or were up-graded through further training in the Soviet Union by 1960; 150 completed training or were further trained to post-graduate levels in China; probably less than 100 returned to China after 1949 from the United States, Europe and Japan with post-graduate degrees at the doctoral level in the natural sciences: gross total, 1,338. From this should be subtracted losses through death, those inactivated for political unreliability, retirement and ill-health, and those involved in other activities, such as politics, administration, etc.

better universities. The most rapidly expanding group appears to be in engineering, probably making up a significant proportion of the 1,200 to 1,500 who have completed their post-graduate training in the USSR and returned to China.

The government is trying to encourage university professors to supervise and conduct research and in 1957 set aside $4 million for this purpose. In the case of some of the research institutes of the Academy, faculty members from the neighbouring universities seem to provide, on a part-time basis, all of the scientific guidance available to the research staff, whose regular members may be made up entirely of young college graduates.[59]

Some, perhaps a good deal, of advanced research in some fields has been made possible only because of the assistance of Soviet scientists who have been sent to China to initiate and organise research programmes. Over a hundred Soviet experts were at work in Peking alone by November 1957.[60] For example, in physics a Soviet scientist, who served as a consultant between 1956 and 1958, initiated a series of studies in Kirin; another served as a consultant and participant in research in the Department of Physics of Metallic State at Peking University; and many Russian physicists came to China for brief periods as lecturers and consultants.[61] In chemistry, the Russians in 1956 sent N. P. Luzhnaya to work for half a year in the six chemical institutes of the Academy of Sciences and others were sent to direct research studies as part of the Soviet Union's contribution to the thirty projects of the Twelve-Year Science Plan involving inorganic chemistry.[62] But these are temporary expedients.

The Control of Science

In view of the small number of scientists and the large scale of the government's development programme, the use of Chinese scientists became a matter of critical importance to the régime. Where should the direction and control of China's scientific resources be lodged?

As has been indicated, the leaders of Communist China until 1956 left to China's scientists the responsibility for governing their own professional activities. In 1954 and 1955, following the termination of the Korean War, the Academy of Sciences lost its cabinet rank under

[59] See "Chemistry Department of Northwest University and Sian Chemistry Research Institute Join Efforts in Scientific Research," *Kuang-ming Jih-pao*, December 23, 1959, in Union Research Service (hereafter URS), Vol. 19, No. 12, pp. 174–176.

[60] *Vestnik Akademii Nauk SSSR*, Moscow, 1959, No. 9, p. 50.

[61] *Fizika Metallov i Metallovedeniye*, Vol. VIII, 1959, No. 6, pp. 820–828, in JPRS: 2425 (March 31, 1960), pp. 1–13.

[62] *Zhurnal Neoorganicheskoy Khimi*, Vol. III, 1958, No. 2, pp. 542–545, in JPRS: 2568 (April 27, 1960), pp. 1–9.

the Constitution adopted in September 1954, but received endorsement as " the supreme academic organ of the state charged with the important mission of directing and promoting scientific work throughout the country." [63] The Academy was reorganised and divided into four departments. In June 1955 at a national meeting the Academy was given prestige and national character through the appointment of 233 members to its four new departments. Its institutes were strengthened; its control over scientific personnel increased; and it was empowered to encourage science through a system of national science awards, by improving the material and social status of scientists, and by developing co-ordinated direction over scientific research throughout the country.

At the inaugural meeting, Vice-Premier Ch'en Yi, a member of the Party's Politburo, asked the scientists " to use their own labour and wisdom " to meet the needs of the state and the requirements of science. This idea had been endorsed earlier by the Party paper, *Jen-min Jih-pao*. It asked for recognition that " scientific workers have their own mission, which is to conduct research." [64] Later at the Eighth Party Congress in September 1956, Yü Kuang-yuan, the head of the Science Division of the Propaganda Department of the Central Committee of the Party, stated that—

> In leading scientific work, the Party should rely on scientists to the fullest extent. Modern sciences are finely divided into various fields. Only the specialists know the fine points of a certain field of science. When we have scientific problems, we must learn humbly from specialists.[65]

In keeping with this approach, responsibility for formulating the Twelve-Year Science Plan was placed largely upon Chinese and Soviet scientists. It thus represented " The crystallisation of the collective wisdom of scientists." [66]

At the Eighth Congress of the Communist Party, however, there also was a restatement of the purpose of scientific inquiry. The Party adopted the Second Five-Year Plan, which called for the development by the end of 1962 of a " self-contained industrial network." In this scheme, heavy industry was made the first priority as the foundation of economic development and national defence. This required more and better industrial technology. Therefore, the Party concluded that it " should actively and selectively develop research in science," in order to meet the needs of national construction.[67]

The Communist Party operated on " the principle of subservience of scientific research to the requirements of the state." This meant the

[63] *Jen-min Jih-pao*, June 3, 1955.
[64] *Ibid*., February 27, 1955.
[65] Peking Radio, September 26, 1956.
[66] Kuo Mo-jo to the NPC, NCNA, June 18, 1956, in CB 400, p. 3.
[67] Yü Kuang-yuan to the Party Congress, Peking Radio, September 26, 1956.

pursuit of scientific research and scientific activities had to be according to plan and not along the lines of the personal research interests of individual scientists. Plans determined the character and quantity of work required of scientists and science to meet staged goals for national development. The principle of " subservience " required central direction and control to ensure fulfilment of the plans.[68]

When the Academy of Sciences convened its second national conference, May 23–30, 1957, Party policies had begun to take effect and the role of the Academy had changed. In connection with the preparation of the Twelve-Year Science Plan, the State Planning Commission appointed on March 14, 1956, a Scientific Planning Committee, chaired by Ch'en Yi. In May 1957, before the second national conference of the Academy of Sciences, it was transformed into a standing commission of the State Council, and its membership increased from thirty-five to 106.[69] The Commission replaced the Academy of Sciences as the " national organ for policy making " in scientific matters. It was charged with responsibility for organising scientific institutions and undertakings, collating and co-ordinating plans for scientific research in each area, integrating plans and activities in science with national plans and programmes, supervising the execution of all plans, controlling the use of research funds, establishing working standards and pay scales for scientists, developing training programmes, organising international exchanges and communications among scientists and promoting the recruitment of Chinese scientists abroad.

This was not surprising. The Academy had a poor record in serving claimants for scientific assistance. As the state's programmes began to develop, the demands for scientists became urgent and competitive in many sectors of the state; heavy industry, light industry, higher education, health, agriculture, defence, and the research institutes of the Academy of Sciences itself. In 1955 the head of the Academy admitted that the Academy, which was charged with providing for national needs, had given no study to " the needs of national construction," prepared no plans for the development of science, made no rational distribution of research institutes to meet the requirements of new production bases, and developed no effective national science roster with a system of assigning scientists to priority jobs.[70]

Moreover, scientists were not administrators and many complained constantly about the administrative tasks laid on them. But there was also a deeper problem. Among the scientists there was strong feeling

[68] This subject has been dealt with in great and reiterative volume. Examples are: Chou En-lai to the NPC, June 26, 1957; Kuo Mo-jo to the NPC, July 5, 1957.
[69] *Communist China, 1957*, Union Research Institute, Hong Kong, 1958, p. 119.
[70] NCNA, Peking, June 2, 1955, SCMP 1066, pp. 6–8; NCNA, Peking, July 21, 1955, in CB 351, pp. 20–24.

that the Academy and China's scientists should devote themselves to research on basic theoretical problems, seek to develop new branches of science, improve standards of research and raise the level of science education rather than to give their time to problems of industrialisation and elementary science training where their skills were under-utilised.

Realising that scientific and technical knowledge was essential for the achievement of their plans, the government, however, was eager to find ways of releasing " the activity and creative efforts of scientists in a more effective way." It hoped that with policies of liberality and greater freedom, scientists and intellectuals would respond with a greater effort in support of the régime's programmes. Instead, latent differences between scientists and the Communist Party broke into a " bitter struggle " in 1957 when the Party in its " Hundred Flowers " campaign found itself involved in deep and sharp controversy with intellectuals all over China.[71] The question of control over science received sharp and explicit answer and definition.

Had the Communist Party not had a prepared and dogmatic position on the matter, the debate might have gone along lines in other countries where thoughtful people are disturbed and perplexed by the relationship which should prevail between science and government. Essentially, the issue concerned the nature of scientific activity. Was science a self-sustaining and independent area of human inquiry with its own disciplines, subject-matter and intrinsic purposes? Did the natural sciences have a " class " character? If not, did the " class " character of the scientists affect scientific work? While the scientists argued over the emphasis to be given to theoretical as opposed to applied research, to the pursuit of new knowledge and understanding for their own sake *versus* subordination of science to planned programmes for technological achievement, the Party was interested in the locus of decision-making and authority.

There could be no doubt of the position of the Communist leaders in this contest. They attacked the scientists for arguing that " laymen cannot lead experts." The statement of a Vice-Premier that " a bitter struggle exists between us and the bourgeois scientists who maintain that Communists are laymen," defined part of the problem.[72] When scientists advocated academic leadership on the grounds that scientists and not politicians were qualified to guide scientific work, the Party charged them with political motives and opposition to the principle of " letting politics

[71] For general accounts of this controversy, see Theodore H. E. Chen, *Thought Reform of the Chinese Intellectuals* (Hong Kong Un., 1960); Roderick MacFarquhar, *The Hundred Flowers Campaign and the Chinese Intellectuals*, (New York: Praeger, 1960).

[72] *Hung Ch'i*, No. 9, October 1, 1958.

be in command." Communist leaders interpreted the criticisms of scientists as an attempt "to oust the Party from the field of science." The head of the state's Scientific and Technological Commission later pointed out that "Should we allow science to take the course directed by bourgeois experts, the scientific work of our country would completely drift away from its political mission in Socialist construction." Hence there must be "absolute Party leadership over science and technology" as the "basic guarantee for full manifestation of the superiority of Socialism, and for speedy development of scientific techniques in our country."[73]

As the outcome of this "struggle," China's political planners and policy-makers took firmer control in the direction and administration of science policy and operations. The Scientific Planning Commission was replaced by an even more powerful body under the State Council with jurisdiction over both scientific and technological activities. This is the Scientific and Technological Commission established on November 23, 1958, through a merger of the Scientific Planning Commission and the State Technological Commission. A group of senior and reliable Communist Party members, under the chairmanship of Marshal Nieh Jung-chen, a Vice Premier and member of the Central Committee of the Party, now control science. While the character of this body manifests the importance the régime attaches to science and to the co-ordination of science with technological and industrial development, none of the members of the commission are leading scientists.[74]

The functions of this Commission with respect to science are similar to those of the Scientific Planning Commission, but its jurisdiction is wider. It supervises not only research activities but also the associations of scientists and the organisations disseminating scientific information. The two national bodies active in these fields since 1950, the All-China Federation of Natural Science Societies and the All-China Association for the Dissemination of Scientific and Technical Knowledge, were combined on September 23, 1958, to form the People's Republic of China Association for Science and Technology, which was subsequently placed under the control of the Commission.[75] In December 1959 the Scientific and Technological Commission undertook to extend its direct control through local commissions, over scientific research in all parts of China,

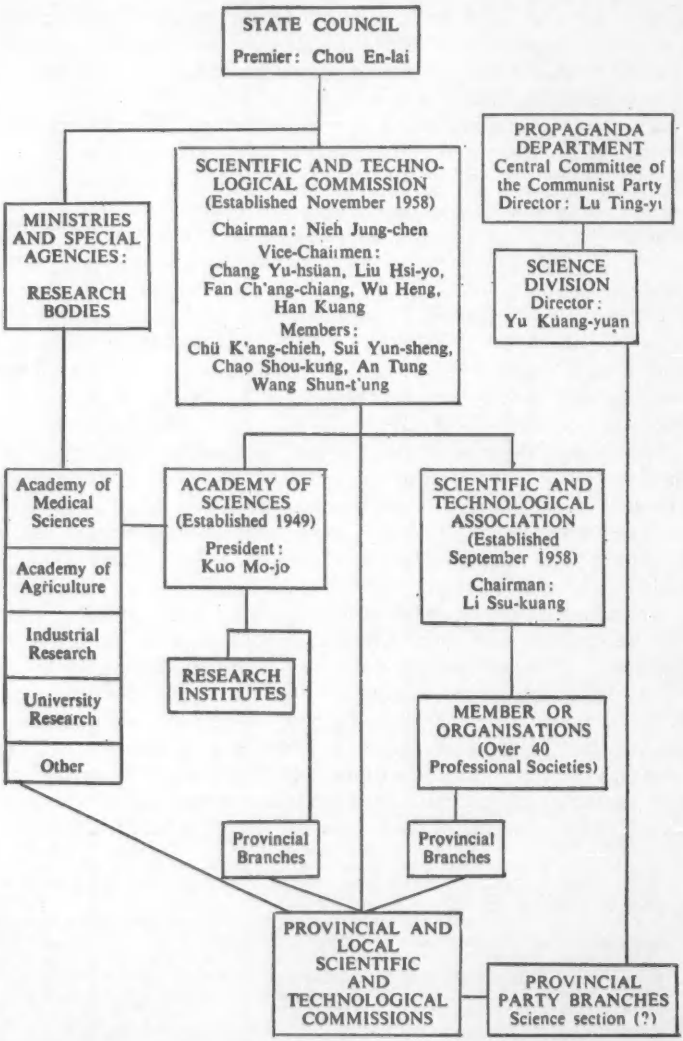
[73] Nieh Jung-chen to the First National Congress of the Scientific and Technical Association of the People's Republic of China, *Hung Ch'i*, No. 9, October 1, 1958, in URS, Vol. 13, pp. 278–297.

[74] The members of the Scientific and Technological Commission include: Nieh Jung-chen (chairman); five vice-chairmen: Han Kuang, Liu Hsi-yao, Chang Yu-hsuan, Fan Ch'ang-chiang, and Wu Heng; and, in addition, An Tung, Chao Shou-kung, Chü Kang-chien, Sui Yun-sheng, and Wang Shun-t'ung. Scientific personalities such as Kuo Mo-jo and Li Ssu-kuang, who were on the Scientific Planning Committee, are not included on the Commission.

[75] For the Resolution setting up the "Science Association," see *Hua Hsueh T'ung-pao*, 1958, No. 12, pp. 673, 674.

TABLE III

Organisation of Science in Communist China



as well. These commissions " under the leadership of the Party committees," organise and co-ordinate the activities of the branches and institutes of the Academy of Sciences, industries and higher educational institutions on the principle " that the whole country is a chess board." The commission's responsibilities include mapping out local science and technological plans, assigning parts of the local plans to various institutions, and ensuring the inclusion of all projects in the overall plan of scientific and technical development.[76]

The national framework for the organisation and control of science subsequent to these changes and developments is indicated in the chart opposite:

" Storming the heights of science," like the country-wide drive to raise the output of iron and steel through backyard furnaces, has led to the diffusion and decentralisation of research. All over the country universities and technical schools expanded or developed research programmes—mostly with direct application to production and construction projects in industry and agriculture. The Ministry of Higher Education in 1957 assigned 6,700 assistants to faculty members in order to free them for more research.[77] Under this programme over 23,000 professors and teachers throughout China were said to have worked on more than 20,000 research problems.[78] Industrial enterprises, the Academy of Agriculture (established on March 1, 1957) and the Academy of Medical Sciences (established on December 11, 1955) were caught up in mass research with " peasant scientists " and " worker scientists " helping to over-achieve research targets.[79]

Dramatic results emerged, according to Chinese spokesmen: " The articles published by the academic journals of the different societies in the natural sciences under the Chinese Academy of Sciences and the All-China Federation of Scientific Societies contained, for example, 47 per cent. more words in 1958 than in 1957. Compared with 1952, the increase was twenty-one times." These were considered " most convincing statistics " of the achievements of the mass effort to break through the scientific bottle-necks in the scientific and technological fields.[80]

[76] *Kuang-ming Jih-pao*, December 19, 1959, in URS, Vol. 19, p. 173.

[77] NCNA, March 15, 1957.

[78] *Pei-ching Jih-pao*, October 7, 1957, p. 4.

[79] Research was developed under the Academy of Medical Sciences at the Research Institute of Hematology and Blood Transfusion, with six sections, and at the same time hospital and health organisations throughout the country launched research programmes. Scientific work in agriculture had been centred in three national and fifteen provincial research institutes, but suddenly in 1958 agricultural research, according to reports, was metamorphosed and throughout China research teams and institutes were at work: 157 at the provincial level, 190 in *chuan* or *ch'ü*, 771 in *hsien* or county and 7,690 in communes. *Jen-min Jih-pao*, April 12, 1960; *Kuang-ming Jih-pao*, December 25, 1960.

[80] Nieh Jung-chen reported by *Jen-min Jih-pao*, September 27, 1959, in CB 608, p. 10.

The overall range and distribution of the research activities in 1958 as reported by the State Statistical Bureau at Peking, is indicated in the following table:

TABLE IV

Scientific Research Institutes and Personnel (1958)*

	Number of Institutes	*Personnel (thousands)*	
		Total	Of which: research & technical personnel
Total	848	118·6	32·5
Of which:			
Basic science	170	28·3	5·9
Industry and communication	415	59·2	14·7
Agriculture, forestry, animal husbandry and fishery	134	10·8	1·2
Medical science and public health	101	12·1	2·2

NOTE: Data covers the institutes of natural sciences and technology under the various ministries of the Central People's Government, provinces, municipalities directly under the central authority, autonomous regions, seven municipalities and the Chinese Academy of Sciences. Institutes of philosophy, social sciences, literature and the arts are not included.

**Source*: State Statistical Bureau, *Ten Great Years: Statistics of the Economic and Cultural Achievements of the People's Republic of* China, (Peking: Foreign Language Press, 1960), p. 203.

This fury of effort "to achieve greater, faster, better and more economical results" was in compliance with "the guide-line of walking on two legs" enunciated by the Party's Central Committee and Mao Tse-tung. It calls for more work "both at the Central Government and local levels simultaneously on a big, intermediate and small scale."[81] Under a policy of uniting scientific research, education and production, local scientific bodies are being developed to form a "national scientific research network." From Chinghai in the west to Kirin in the north-east the development and organisation of science has been added to the responsibilities of provincial and local governments. Each province appears to be organising a scientific work committee under the sponsorship of the Scientific and Technological Commission to establish

[81] *Jen-min Jih-pao*, October 11, 1959, in CB 608, p. 13.

branches of the Academy of Sciences and of the Association for Science and Technology. At lower levels the directives call for "scientific research and science popularisation organs." [82]

These local, mass organised activities may be a useful means for reorienting social attitudes and quickening the diffusion of technical skills in the population, but they have little bearing on China's capacity for advanced scientific achievement in the present decade. The central government recognises this and is not allocating its research funds for these mass research activities, which are charged to local and provincial budgets. The central government reserves its funds for research in nationally controlled scientific, industrial and educational institutions. Scientific achievement depends, then, more on the universities and academies, particularly the Academy of Sciences. Although the latter's share in the national budget for science and research was only 27 per cent. in 1957, it remains the major centre of theoretical and academic research.

The Academy of Sciences

The Academy of Sciences serves a unique function in a country short of scientists and without highly developed technological and research facilities. It is an institutional device, first inaugurated in China by the Nationalists when they came into power, enabling a technically and scientifically under-developed country to carry on scientific work at an advanced level. First-rate minds trained in the best scientific institutions abroad are brought together in a few centres where scarce and costly facilities are concentrated. Thus at minimum cost and within a technologically and scientifically retarded environment, China is able to carry on some work which is abreast of world scientific progress. Moreover, these science centres serve as reservoirs of scientific talent and knowledge to be drawn upon by other groups and enterprises in the country needing specialised assistance and guidance. They also provide the resources for the advanced training of new generations of scientists.

Almost all of the leading scientists of China are associated with the Academy of Sciences. First of all, most of the research scientists appear to be on the staffs of the Academy's institutes. Secondly, eminent scientists outside of the Academy are appointed to serve together with senior scientists in the Academy as members of the national scientific committees attached to each of the five departments into which the work of the Academy has been divided. Finally, most, if not all, of the research

[82] See, for example, Report of Yuan Jen-yuan to the Chinghai Provincial People's Congress, *Chinghai Jih-pao*, Sining July 4, 1958, in JPRS: 5847 (November 7, 1960), p. 46; Wang Huan-ju to the Kirin People's Congress, *Kirin Jih-pao*, Ch'ang-ch'un, May 27, 1960, in JPRS: 4135 (October 24, 1960), p. 14.

institutes of the Academy have scientific committees, usually with a dozen or more members, composed of scientific specialists in the appropriate field to help plan and guide substantive work.

On June 3, 1955, the State Council appointed 233 of China's leading scientists as members of the Academic Departments of the Academy.[83] On May 31, 1957, twenty-one additional appointments were announced at the closing session of the second national meeting of the Department Committees.[84] The Department Committees were to meet simultaneously once a year to discuss the work of their departments and of the Academy, but thus far have been convened in full sessions only twice—in June 1955 and in May 1957. A third meeting concerned only with the natural sciences was held at Shanghai with 131 members in attendance.[85]

Originally meant to be "the supreme organ of the Academy of Sciences," the Department Committees have not been empowered with authority and progressively have lost importance. Once acclaimed as the equivalent of Academicians in the Soviet Union, and promised such recognition and status in 1955, no titles and responsibilities have been conferred upon them as yet.[86] Although many of the scientists believe that direction of the Academy should be in professional hands, the government clearly is not prepared to turn control of the Academy over to men who are not altogether in accord with its views and policies.

At the level of the research institutes, however, the views of scientists appear to be taken into account in carrying out priority projects and programmes. Although not in a position to direct over-all policies of the Academy, the members of the scientific committees of the institutes provide expert guidance on the character and direction of research. Through these committees, the best of the younger and older scientists, probably well over a thousand altogether, are drawn into the work of the Academy at its technical levels. In addition, some of the institutes are able to mobilise wider counsel and support through national conferences of scientists in their fields. In April 1958, for example, the Institute of Chemistry at Chung-kuan-ts'un, the new research and educational centre four miles from Peking, called a conference attended by 120 chemists from institutes, industries and universities.[87]

The direction and control of work in the Academy of Sciences is exercised by the Academy Council and its Standing Executive Committee. This body is responsible to the State Council, apparently through

[83] The members are listed in SCMP 1062, pp. 37 *et seq.*

[84] The list of names appears in CB 460, p. 17.

[85] NCNA, May 12, 1960, in SCMP 2262, pp. 29–31.

[86] Kuo Mo-jo's speech to the Department Committees of the Academy, *Jen-min Jih-pao*, June 12, 1955, in CB 359, p. 11; *Jen-min Jih-pao*, June 3, 1955, in SCMP 1064, pp. 14, 15.

[87] NCNA, April 9, 1958.

TABLE V

Organisation of the Academy of Sciences

the Scientific and Technological Commission. Thus far no constitution of the Academy has been published although a committee for drafting a constitution, headed by Chu K'o-chen, was appointed in 1957.[88] Nonetheless, it is possible from scattered references to piece together a rough picture of the administration and organisation of the Academy.

Policy and organisational matters are in the hands of a small group of "reliable" scientists and Communist Party representatives in the Academy Council.[89] Under the Council and a Secretariat, located at the Academy's headquarters next to the National Library in Peking, the work of the Academy is divided between administrative and scientific activities. The administrative offices and services seem to be staffed in large part by Party members, few of whom have any scientific background, although the Party has sought to train some of its cadres for scientific administration.[90]

Scientific activities are now organised under five, formerly four, departments: (1) Physics, Chemistry and Mathematics; (2) Biology; (3) Earth Sciences (*i.e.*, geology, geophysics and meteorology); (4) Technical Sciences; and (5) Philosophy and Social Sciences. Each department has a director, deputy director, departmental committee, standing committee and secretary or secretariat to supervise the work of the institutes and research projects within its jurisdiction.[91] The standing committee of each department, composed of the director, deputy director, and "several members elected by the department concerned," is supposed to meet once a month "to handle routine matters of the department."

The organisation of the Academy is indicated in the chart on p. 125.

The scientific work of the Academy is carried on in its institutes and by its research teams. These now number over a hundred and they have been rapidly increased in number.

Each institute has its own character, depending upon its size, location, type of research, leadership, national importance assigned to its activities, and other factors. They vary greatly in size. Some with big laboratories, major research facilities, or large comprehensive projects, such as the Institute of Nuclear Physics, the Institute of Geology, or the Institute of Geography, have hundreds of employees. Smaller and newer institutes may have less than a dozen members on their professional research staff.

[88] *Jen-min Jih-pao*, May 31, 1957.

[89] While no list of the members of the Academy Council has been found, its Standing Committee probably includes the President, Vice President and Secretaries of the Academy.

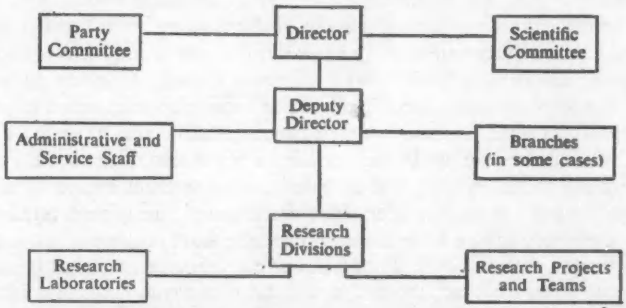
[90] This was discussed by Yü Kuang-yuan at the Eighth Party Congress, Peking Radio, October 9, 1956.

[91] See Appendix for "Regulations on the Organisation of the Departments of the Chinese Academy of Sciences."

Each is under a director, all of whom seem to have scientific qualifications, usually one or more deputy directors, and a Scientific Committee. The larger institutes appear to be organised along the lines indicated in the following chart:

TABLE VI

Organisational Structure of Research Institutes



Work taking place in the research institutes of specific academies and ministries of the government has been dealt with by others.

Within the institutional arrangements for directing and conducting scientific activity, however, there are many factors which have an important bearing on China's capacity for scientific achievement. Some of these are the product of doctrines and decisions by China's rulers; others inhere in the history and tradition of the Chinese people. The large picture is complex and difficult to evaluate; but a few features of the situation seem to be clear enough to justify summary comment.

IN SUM: TWO STEPS FORWARD: ONE STEP BACKWARD

First, like much of the world, China possesses a retarded scientific culture. Modern science is a foreign import, Western in origin, which is only beginning to take root in what the Communists describe as a "backward" society. Hence, China's modern scientists, in a sense, are still cultural aliens and, in the case of the older Western-trained scientists, political aliens, within their own society. They face the problem of adapting a foreign yet trans-national scientific culture, with its precise experimental and speculative methods, to the Chinese situation. In a scientifically unsophisticated environment they are bearers of ideas and working habits which China's political leaders, hedged by Marxist dogmatic certainties, do not appear to comprehend and trust. Yet they have a tremendous advantage. The ambition to industrialise China's

economy and to modernise her society has led China's leaders to open the way to systematic scientific activity and to mobilise the entire population of a tradition-bound country to accept and utilise scientific and technical concepts and innovations.

Secondly, China's national ambition has resulted in major emphasis upon the applied sciences, engineering and technology in support of national development programmes. Clearly the Chinese are devising strenuous means for increasing the speed of technical change and are attempting consciously and drastically to foreshorten transitional stages through which other nations have passed on the way to industrialisation.[92] Scientific research, as in the Soviet Union, is strongly linked to production. Research institutes are called upon to "set up experimental factories so that the results of their research can be readily applied to production."[93] But they are not bound entirely to Soviet and other models, and are willing to experiment and take some risks without regard to cost. China's science overlord, Nieh Jung-chen, stated the official attitude: "We can afford to be a little bolder in scientific attempts than in economic construction, because even if we fail, our economic loss will not be very big, but if we succeed, the result will be significant. Besides, initial failures in scientific experiments often provide conditions for eventual success."[94] The Chinese may well obtain some striking successes by their rate of innovation and application of scientific methods in transforming an underdeveloped economy and society.

Thirdly, research in basic science, nonetheless, is not altogether neglected, but even here the Communist leaders exhibit strong pragmatic motives. They support research because "the choice of technical policy and formulation of production plans often have to depend on the result of research" and because research "will open up new avenues for the development of production."[95] In the Academy of Sciences, as President Kuo Mo-jo has suggested, a few scientists of the highest calibre are or should be engaged in taking "scientific theories to a higher level."[96] Some contributions can be expected from these talented minds in their own fields of specialisation. By and large, neither the direction of the main body of research, the amount of time given to theoretical problems, nor the quantity and character of research facilities suggest that China will soon be a major contributor to theoretical knowledge over a broad

[92] Nieh Jung-chen, *Jen-min Jih-pao*, Sept. 27, 1959, in CB 608, p. 9; *Hung Ch'i*, No. 9, October 1, 1958, in URS, Vol. 13, No. 19, pp. 283, 286. Many Chinese Communist statements and writings seem to have an underlying feeling or fear that time is running out and speed is important.

[93] *Hung Ch'i*, No. 9, October 1, 1958, in URS, Vol. 13, No. 19, p. 295.

[94] *Ibid.* pp. 284, 285.

[95] *Ibid.* p. 287.

[96] *Jen-min Jih-pao*, May 24, 1957, in CB 460.

range of scientific inquiry. Meanwhile, the Chinese Communist Government and China's scientists are searching the scientific literature of the world for ideas which can be applied in China, and which will serve to enrich their own research.

Fourthly, the scale of support given to scientific research in Communist China is still very modest by international standards.[97] Even after 1957, when over 1 per cent. of the central government budget, exclusive presumably of military research and development, was allocated to science, the outlay totalled no more than $400 to $500 million. With limited personnel and facilities, more money probably cannot be used profitably. Even before 1957 the Academy of Sciences did not spend its entire allocation.[98] Comparisons are difficult. Nonetheless, since the Chinese Communists have set Russia up for emulation as the world's leader in science and have modelled their own Academy of Sciences on the Soviet Academy of Sciences, it may be useful to compare the two Academies as the focal agencies of scientific activity in these countries.

By 1959 the Chinese Academy of Sciences claimed to have about 7,000 scientific workers. It is estimated that of these 800 were senior researchers with doctorate-level training; 800 were associate researchers with the equivalent of a master's or bachelor's degree in science and with research experience; 5,400 were research assistants, advanced trainees and technicians with higher or technical school training in science; and 1,900 were selected science students, most of whom were working for bachelor's, and a few for advanced degrees in the special training institutes of the Academy. Including administrative and service personnel, 40,000 people were employed by the Academy.

Ten years earlier, in 1949, the Soviet Academy of Sciences had 6,053 scientific workers divided into the following categories: 918 senior researchers; 2,455 associate researchers; 2,680 research assistants; 1,734 students working for bachelors' and advanced degrees; and a total of 20,000 employees, including administrative and service staff.[99]

The striking difference is in the ratio of trained scientists to junior personnel and technicians in the two Academies. The Russians had more than twice as many in the senior and associate category (3,373) as had the Chinese (1,600). On the other hand, in China a large number of technicians, junior personnel and service staff had been assigned to the Academy, giving it twice as many employees as the Russian Academy ten years before. The broader, nation-wide picture likewise illustrates

[97] The reported science budget of the Soviet Union for 1961 is $4.44 billion (4 billion new roubles at the official rate of exchange of $1.11 to the rouble), or 5 per cent. of the total budget—reported in the *New York Times*, December 21, 1960.

[98] Kuo Mo-jo to the NPC, June 18, 1956, Peking, June 18, 1956, in CB 400, pp. 1–5.

[99] Conway Zirkle and Howard A. Meyerhoff, *Soviet Science* (Washington: American Association for the Advancement of Science, 1952), p. 73.

the distance China has to travel. Ignoring the question of quality, Russia was reported in 1955 to have about 3,000 organisations for scientific research with 100,000 research personnel[100]; whereas in China in 1957 there were 580 research institutes with 28,000 research and technical personnel.[101] By 1959 the Soviet Union was reported to have 310,000 scientists of whom 10,500 had the degree of Doctor of Science and 94,000 the degree of Candidate of Science.[102]

China thus is far behind the Soviet Union in its over-all scientific resources. To catch up with the Soviet Union even in a few sectors of science and technology in the next seven years and thus reach advanced world levels in these fields will require an extraordinary performance.

Fifthly, co-operation with the Soviet Union in science has steadily increased during the past ten years and shows no signs of diminishing. China's needs for scientific assistance account for this in large part. China is far from self-sufficient in scientific resources; years, probably decades, of development will be needed before she reaches the point of producing the scientists she requires. Communist China's dependence upon the Soviet Union during the past decade may have been also motivated by other considerations. The record suggests that Peking felt China's senior scientists were ideologically unprepared and politically unreliable to qualify as architects of a new organisation and plan for science in China. Thus they turned to the Soviet Union for "socialist" scientists to revamp scientific research and organisation instead of to their own specialists whose backgrounds were both non-Communist and Western in orientation. In any case, the magnitude of Soviet assistance and guidance appears to have given Chinese scientific endeavours the imprint of Soviet science with its strengths and weaknesses.

Sixthly, a remarkable feature of scientific organisation in Communist China is the development of large and top-heavy administrative superstructures. This, as has been noted, is capped by the State Scientific and Technological Commission, and is also evident in the administration of the Academy of Sciences and provincial systems for science development and control. At the national level some of the organisational and developmental tasks undertaken by the Party and State Council clearly required strong political direction and authority. This the scientists were not in a position to provide. Moreover, after 1957 the resources provided to science were sufficient in volume to require allocation by the top rank of state planners. In addition, there was an extension of the Party administrative system throughout scientific establishments, adding additional bureaucratic channels. The launching of mass science

100 Kuo Mo-jo to the NPC, NCNA, July 21, 1955, in CB 351, pp. 21, 22.
101 *Ten Great Years, op. cit.*, p. 189.
102 Reported in the *New York Times*, December 26, 1960.

and technological programmes required a further proliferation of administrative and organisational bodies running from Peking to the communes. Whether the tremendous pressure to produce "results" has led to the over-organisation of science, is hard to judge. On its face, this would appear to be possible.

Seventhly, a related problem is that of communication between scientists and top political leaders. In contrast to the Soviet Union where a large number of scientists are members of the ruling élite and are even within the inner circle of political power, Chinese senior scientists as a group appear to have little or no direct and intimate association with Mao Tse-tung and senior Party officials. This anomalous situation might be ascribed to several factors: the Party's distrust of most Western-trained, bourgeois scientists; the absence of any scientists among the senior members of the Party; a feeling of uneasiness on the part of politicians and generals in associating with highly trained specialists; a possible "intellectual lag" on the part of China's first-generation Communist leaders to grasp the full implications of science and scientific modes of thought; and a reluctance to admit newcomers and those untested by political and military trials to the inner circle of power. A situation in which scientists have relatively little influence may have serious consequences by leading the régime both to over- and under-estimate the implications of scientific and technological developments.

This situation may change as new generations of scientists appear, although reports on the Chinese policy of rigidly segregating Chinese students studying in the Soviet Union from participation in normal student and public activities may be an indication that the Chinese are not entirely at ease about the effect of influences emanating from other quarters within the *bloc*. In any event, the Chinese Communists seek to correct the situation by giving preference to students with Party and worker-peasant backgrounds for training in the sciences, and by recruiting into the Party those science students who have requisite political and ideological qualifications. In 1957 over 62 per cent. of the research students in the Academy were either members of the Communist Party or of the Communist Youth League.[108] Political tests are also applied in selecting students for admission to the new University of Science and Technology in Peking.

Eighthly, the presence and supervisory intervention of the Communist Party is evident throughout the entire range of scientific organisations. The Central Committee of the Party exercises controlling influence through the Science Division, headed by Yü Kuang-yuan, of its Propaganda Department under Lu Ting-yi. As Party supervisors have grown in sophistication, these Party administrators and units are probably not

[108] Kuo Mo-jo to the NPC, *Jen-min Jih-pao*, in CB 467, p. 12.

as obstructive as they once were and may, in fact, facilitate research and concentrated work by clearing the way for the fulfilment of planned targets.

Ninthly, as in most countries, the social sciences are neglected. There is an understandable reluctance on the part of governments and societies to expose their political and social systems and beliefs to objective and scientific research and analysis. In a country controlled by men with firm and explicit ideological predispositions and under an authoritarian or totalitarian system, reluctance tends to crystallise into bristling opposition. "Social sciences have a clearly defined class character" and, therefore, have only one major task to perform, the creative application of the "real science" of Marxism-Leninism to human history and social phenomena.[104] This, of course, is the incessant function of the Party. Consequently, social science research in an academic sense has become unimportant and been restricted to supporting the propaganda activities of the régime, or to working in a few applied fields, such as developing educational methods, working on linguistic problems, or improving the efficiency of industrial and labour practices. Despite the fact that the President of the Academy of Sciences is the Director of its First Institute of History, the social sciences receive little support from the Academy. Moreover, many of China's natural and physical scientists do not accept Marxist social science as scientific and some have urged that the social sciences be removed from the Academy and separately organised.[105] Clearly social scientists in China cannot be expected to make more than the most meagre contributions in theory and application to their disciplines.

Finally, while we are too remote from the scene of science in China to identify and evaluate all of its main organisational features, there is no doubt that science has been shaped to support the developmental programmes of the régime and, in particular, the building of modern heavy industries. In developing science, the priorities in 1960 are placed in three clear categories. The first and "primary task" is research "relating to the development of the national economy." Research on "pioneering science and technology," in which China is "very weak," is placed in the second category as an area in which "energetic efforts" are required. The lowest priority is assigned to "research on fundamental theories."[106] There is no doubt that science and technology are harnessed in Communist China to the goal of national economic development and power.

[104] *Ibid.*
[105] *Ibid.*, p. 13; *Jen-min Jih-pao*, May 27, 1957, in CB 460, p. 10.
[106] "Ch'ang Chin-fu Maps Scientific Tasks," NCNA, June 6, 1960, in CB 622, p. 33.

Agricultural Science and its Application *

By RALPH W. PHILLIPS and LESLIE T. C. KUO

CHINA is a vast country, varying widely in its land, its climate, its agriculture and its people. Extending across some 35 degrees of latitude, and with extreme ranges in elevation and in precipitation, it has many types of agricultural production. At one extreme are the intensively cultivated rice fields of the south. On some of these, two crops of rice are grown per year; some are drained after the rice harvest for the production of a crop of winter vegetables. At the other extreme are the grassland areas of the northern Manchurian provinces, Inner Mongolia, Kansu, Chinghai, west Szechwan, Tibet and Sinkiang, with their herds of sheep, goats, cattle, yaks and camels. In between is the so-called wheat area, north of the Chingling Mountains and extending to the edge of the grasslands.

China is now a country undergoing revolutionary changes. Although the revolution in political structure is practically complete, and the country has been started on the path of industrialisation, agriculture as such is in only the early stages of revolution. However, the farmers who work the land, the Tibetan, Mongolian, Kazakh and other grassland peoples who follow their livestock, and the agricultural scientists who serve both groups have been organised, and are being further organised and trained, not only to complete the revolution from a peasant to a modern agriculture, but also to ensure that agriculture serves the ends of the political and industrial revolutions.

Agricultural science, with its many phases, is complex in itself. But in Communist China, it must be considered in relation to the political thought and action that have controlled its development. In that control, emphasis has been placed upon production and the furtherance of research which might contribute to immediate increases in production. So, much more can be said of the applications of agricultural science than of new fields of exploration. But the two are so interwoven that it is hardly possible to treat them separately.

* This paper is based on one entitled "Agricultural Science in Communist China" that was presented as part of the symposium. That detailed version, with literature citations, will appear during 1961 as part of an AAAS Symposium Volume. The present summary version has also appeared, in essentially the same form, in *International Development Review*, III (1): 19–23, February 1961.

The information we have on agricultural science and its application is far from complete; in addition to the many gaps, some of what we have is no doubt misinformation. Only a brief resumé is presented here.

Agriculture in China is already highly socialised and organised to serve the interests of the state. The present situation has been arrived at in three major phases:

(1) A land redistribution or land reform phase, which was carried out from the time the Communist régime came to power in 1949 through 1952. Under a law promulgated in June 1950, some 116,670,000 acres of land and large numbers of draft animals and amounts of farm tools and other property were redistributed to farmers.

(2) A co-operative phase, during which there was a shift of ownership control from the individual farmers to the co-operatives, and the development of mutual assistance brigades. In some co-operatives the land remained the property of individuals but was utilised by the co-operative as a whole, while in others it became the property of the co-operative. This phase was carried to completion during the First Five-Year Plan, 1953 to 1957 inclusive.

(3) The transformation of groups of co-operatives into people's communes. This process began in 1958. By the end of September 1958, 121,936,350 rural households, or 98·2 per cent. of the total, had been organised into 26,425 communes, and the basic transformation was completed by December of that year. This was not only a major step in the completion of the collectivisation of agriculture, and practically a final step towards state ownership, but it also provided a broader base for industrialisation through the use of the capital, facilities and labour force controlled by the communes. The *hsiang* or administrative unit below the *hsien* or country level was the basic unit for the formation of a commune, and the governing authority for the *hsiang* appears to have become synonymous with the administering authority of the commune. The ownership of banks, stores and certain other enterprises was transferred to the communes. A recent report, emanating from Hong Kong, indicated that, to meet food shortages, the Communist leaders may in effect be reverting to co-operatives and to permitting peasants to retain small plots of land and to raise a few swine and poultry.

Herculean efforts are being made to increase agricultural output through the application of existing knowledge, through the conservation and development of the country's resources by such means as soil conservation, water conservation, extension of irrigation and afforestation, through the production of the requisites of production such as fertilisers, pesticides, machinery and improved tools and implements, and through efforts to prevent or attenuate the natural calamities by building flood control works, studying meteorological data and other means. In all

these efforts, agricultural science has had its role, subordinate to political objectives.

Soil Conservation

In a country which is the most populous on earth, with between 600,000,000 and 700,000,000 mouths to feed and 1,000,000,000 in prospect, the conservation and efficient use of soil take on special significance. The terracing done by Chinese farmers over many centuries, mostly by hand labour, was a monumental achievement. Mounting population pressures have made it necessary for the government to assess the soil resources and to take further steps to preserve them, and at the same time to conserve and more effectively utilise the water supply.

A nation-wide soil survey is under way. A generalised 1:10,000,000 scale map of the country has been completed showing the distribution of sixty-four soil types. Detailed maps are being prepared on the basis of field work, much of which has already been done. In Kwangtung, for example, it is claimed that nearly 180,000 technicians and peasants participated in field work over a six-month period and that soil maps and land utilisation maps of 1:10,000 or 1:5,000 scale have been prepared for all communes, and on a smaller scale for various special districts and *hsien*. Also, 1:200,000 scale map of the province and a publication on its soils have been completed.

In addition to what appears to be a gigantic soil survey effort, practical steps to conserve soil are being taken, such as the terracing of 8,500,000 acres during the winter and spring of 1957–58. Also, technical papers on various aspects of soil science are making their appearance in Chinese journals.

China's rainfall is, on the whole, poorly distributed through the seasons. So two things have been characteristic of China: the terraced rice fields of the south, many of which remain flooded throughout the year to preserve precious supplies of water; and the floods which have plagued the country and in particular the Yellow River Valley and associated areas of the north.

It is claimed that the total area of irrigated land has increased from 39,822,000 acres in 1949 to approximately 168,000,000 acres in 1959. It is evident that many large, medium and small-scale water storage facilities have been built, and that irrigation facilities have been greatly extended. There is some indication that the development of irrigation facilities did not keep pace with water storage construction, but if the available figures are accurate, the proportion of the cultivated area under irrigation has increased from 16·3 to more than 60 per cent. in ten years.

The Communist régime estimates that China has more than 247,000,000 acres of virgin soil, of which about 86,000,000 could be

cultivated at a comparatively low capital cost. It is claimed that 9,880,000 acres of this land were ploughed during the First Five-Year Plan, mostly in Kirin, Heilungkiang, Kansu, Liaoning and Hupeh Provinces, Inner Mongolia and the Sinkiang-Uigur Autonomous Region. There are also reports of the establishment of areas of grass cover. Much of the reclamation effort seems to be devoted to afforestation, however, in an effort to meet the demand for timber.

Woodlands occupy a little under 8 per cent. of the land area of China, compared with 33·9 per cent. in the U.S.S.R., 32·8 per cent. in the United States and 21·6 per cent. in India. An inventory of forest resources is under way. Between 1954 and 1958 about 49,650,000 acres were reported to have been surveyed by ground methods and about 47,000,000 acres by air. It is also reported that some 9,780,000 acres were planted to trees in 1957. The plan is to increase the area in forests to about 2·6 times its present size by 1967.

Although China is the birthplace of paper, the industry is backward and suffers from a shortage of raw materials. In 1957, about 70 per cent. of the raw materials were from annual plants. Sugar-cane press and rice straw were used extensively. Tree branches and tops accounted for about 41 per cent. of the 30 per cent. of the raw materials which came from trees.

Fertilisers

The struggle to maintain a moderate level of fertility in soils that have been cropped year after year, century after century, is not new to present-day China. For centuries both animal and human wastes have been carefully collected and returned to the land. But with a rising population bringing ever-increasing pressure for increases in food production, the Communist government has placed great emphasis on the production of both chemical and organic fertilisers. It is claimed that some 2,500,000 tons of chemical fertilisers have been used annually in recent years. Large modern plants apparently produced 1,333,000 tons in 1959, and much of the remainder was imported. Also, many small fertiliser plants built in the communes, mostly during 1958 and 1959, produce certain amounts of chemical fertilisers. However, most of these fertilisers are of low grade and only one-tenth to one-twentieth as effective as those produced in large modern plants. A target of 35,800,000 tons of fertiliser production has been set for 1962.

Much attention has also been given to the preparation of compost fertilisers made from various materials including vegetable refuse, human and animal manures, ashes, bones, feathers, furs, industrial wastes and mud taken from the bottoms of lakes and rivers. The recent impetus given to pig breeding, and to sheep raising in the Moslem areas, has been in part because of the value placed on the manure from these species.

An effort is now being made to transform the small native-method fertiliser plants into small modern-method plants. A synthetic ammonia plant with an annual output of 800 tons, or enough to meet the needs of about 33,000 acres of land, and which can be built by a commune in four to six months, has been designed and is being constructed at least in some areas. However, the cost of production is reported to be about $163 per ton compared with $74 to $82 in large plants.

Research is being conducted both on problems of fertiliser manufacturing and fertiliser use, but little information is available as to the results thus far obtained.

China has a wide variety of climatic conditions. Consequently, many kinds of plants thrive and are utilised for food production and other agricultural purposes. Even so, except for work on basic food plants such as rice, relatively little had been done prior to 1950 to evaluate the agricultural plant resources of the country and to undertake intensive research programmes for their improvement. It is claimed that during the last ten years more than 180,000 varieties of seeds have been collected from various parts of the country for research purposes, and that from among these 1,200 varieties have been selected for multiplication. It is also reported that approximately 60 per cent. of these selected varieties were developed by farmers. In addition to selections within the country, more than seventy improved varieties of cotton, sugar beets, sunflowers, and other plants were introduced from the U.S.S.R., Poland, and Hungary up to the end of 1959.

It is claimed that 300,000,000 acres were planted to seed from improved varieties in 1958, or 75·8 per cent. of the total area sown. This figure is open to question, since it would mean the total cultivated area was 395,778,300 acres. Earlier, reference was made to 168,000,000 acres or 60 per cent. of the cultivated area being under irrigation. This translates into a total cultivated area of 280,000,000 acres. FAO, in its 1960 *Production Yearbook*, gives the area of arable land as 270,233,575 (109,354,000 hectares). The figure derived from the area under irrigation seems reasonable in relation to the FAO figure, since some new land has been brought under cultivation, but the claim regarding the area planted to improved seed appears to be substantially exaggerated. However, if it includes those areas twice or three times which are seeded two or three times per year then it may be accurate.

In addition to research aimed at the development of improved varieties, botanical research is being undertaken to evaluate the plant resources of the country.

Lysenko and Michurin have had their share of attention in Communist China, at least to the extent that the recent reviews of agricultural progress over the past decade included one on Michurin genetics. The

claims in this review are hardly convincing; just how far the followers of these men have influenced plant breeding work in China is not clear.

Dense planting and deep ploughing were adopted as guiding principles for plant cultivation in Communist China. Deep ploughing, to a depth of 10 to 30 inches depending upon the nature of the soil, was to be repeated at intervals of three years. It is claimed that more than 133,000,000 acres had been deep ploughed by the end of 1958. There are recent indications that the policy may be changing since it seems to be recognised that these techniques aid agricultural production only under certain conditions and that their over-emphasis may produce negative results.

In an effort to boost rice production, an attempt has been made to extend the area growing two rice crops per year. It is reported that in Szechwan, for example, the area was increased from 13,000 acres in 1955 to 750,000 acres in 1956 and to 1,495,000 acres in 1957. The results with the second or late crop were not entirely successful, however. Yields were low because there are few late-crop varieties and most of them are of poor quality and the grain tends to shatter easily. Also difficulty was experienced in getting the first crop out of the field and the second crop planted in time to ensure the ripening of a second crop.

Pest Control and Mechanisation

Plant protection activities have been aimed at the control of insects and diseases, birds, rats and other destructive animals, and weeds. Both modern chemical pesticides and native drugs have been used. In addition to substantial amounts of some thirty chemical pesticides such as hexachloradane and DDT, it is claimed that over 500 varieties of native plants and minerals have been used in the making of new drugs for plant disease and pest control, and that about 17,000,000 tons of these native drugs were used in 1958. The efficacy of 312 indigenous medicines has allegedly been measured against pests of wheat, cotton, potatoes and rice, of which ten are reported to be very effective for the protection of wheat, twenty for potatoes and two for cotton. It is claimed that rust of wheat has virtually been eliminated by the use of native drugs and the popularisation of rust-resistant varieties; also that the two other principal diseases of wheat, mildew and smut, are under control.

The Draft Programme for Agricultural Development for 1956–67 had as one of its major points the wiping out wherever possible of the "four evils"—rats, sparrows, flies and mosquitoes. Later, it was decided that too much progress had been made in killing sparrows, which themselves destroyed insects, so they were replaced in the list of four evils by bedbugs. Some difficulties were reported recently in the weed control

campaign, because of the weather and the diversion of too much of the labour force to other things. Lack of enthusiasm has also been mentioned in the Communist press as a factor.

Research workers in northern China are giving some attention to field rats, moles and other injurious wild animals to discover their habits and to develop methods of control.

Much effort has been devoted to the improvement of tools and implements and to the mechanisation of agriculture. Agricultural workers have been encouraged to suggest new designs for tools and implements, and experimental stations have also worked on this problem. It is claimed that about 10,000 different kinds of tools and implements have been developed for use in various farm operations; that more than 2,000 kinds of rice transplanters—some operated by hand, some animal drawn, and some machine powered—have been devised. Just how many of these are really effective is not known, but it was claimed that by the middle of 1960 approximately one million rice transplanters had been distributed, that they would replace hand transplanting on 70 per cent. of the country's paddy fields in 1960, and that a saving of 300,000,000 man-days during the year would result.

Mechanised farming is now said to be practised on about 4 per cent. of the cultivated land, although one published report claims 15 per cent. In spite of slow progress to date, the Communist régime plans to move ahead with mechanisation and has announced its intention to mechanise all land that can be ploughed, or irrigated by machine, by 1969.

Livestock

Although China is not usually thought of as a livestock country, there is a large livestock population even in the densely populated intensive-farming areas. Also, about 40 per cent. of the total area of the country is grassland, occupied by Mongols, Tibetans, Kazakhs, Tadjiks and other minority groups who devote much of their time to livestock raising. The government's policy is to bring about increases in livestock numbers. Increases have been reported for horses, mules, cattle, sheep, goats and pigs, while donkeys decreased in numbers. Pigs and sheep are receiving the most attention, pigs in the intensive farming areas and sheep in the Moslem areas.

Political domination of science and agriculture may be illustrated by the requirements for managers of pig farms. In descending order of importance these are: (1) clear political direction, (2) a high degree of " activism " for pig raising, and (3) having a certain amount of experience in pig production.

If the numbers of livestock are to be maintained at a higher level, the most difficult problem is that of feed supply. China does not have

a supply of grain specifically for livestock feeding such as is provided by the Corn Belt in the United States. Nor has there been a tradition of storing hay for winter use in the grasslands, and the science of range management has been practically unknown. Efforts are being made to improve livestock feeding. Up to the end of 1958 the chemical composition of 1,032 kinds of feed from different parts of the country had reportedly been determined. Of these, 581 were green feeds which grow wild and have a fairly high nutritive value. Efforts are being made to extend the use of some of them. Chlorella, an algae, is receiving much attention as a feed particularly for pigs, but the claims regarding the amounts harvested from a given area of water and the numbers of animals which can be fed therefrom are so exceptional that they will bear careful checking. However, official action has been taken to encourage the widespread growing of chlorella and it is now said to be growing in more than half the provinces and autonomous regions in the country. Its use for human food is also being encouraged. At elevations above 3,000 metres some experimental reseeding of grasslands is reported to be under way.

Veterinarians have been practising in the villages for centuries, using native prescriptions and methods, including acupuncture, which have been handed down from father to son. The Communist régime issued a directive in January 1956 urging the traditionalist and trained veterinarians to unite and to exchange knowledge. The trained veterinarians are not only producing modern vaccines but are also carrying out research in this and other fields. In the attempt to combine the old and the new, it appears that to a considerable degree the work of diagnosis is left to trained veterinarians and the task of treatment is left largely to the traditionalist veterinarians.

China has been known for its silk for many centuries, and silk production still remains important in the national economy, so efforts are being made to increase the growing of silkworms and the plants upon which they feed. More than 260 varieties of mulberry trees have been collected for selection and multiplication, while 287 breeds of silkworms are being used in improvement work. Research is under way on methods of controlling pests and diseases of both the silkworms and the trees from which they receive their food. A silkworm which feeds on the castor-oil plant has been introduced from India and is being studied and promoted. Silkworms which feed on oak leaves are also responsible for a substantial share of the production, and increased production from this type is being encouraged.

Research

The frequent occurrence of floods and droughts in China has led the Communist régime to give increasing attention to agricultural meteorological research. Studies have been conducted on the effects of climate

on the growth of rice, wheat, cotton, soybeans, corn, rapeseed, fruits, vegetables and other principal crops; on the relationship of cultivation practices to climatic conditions; on measures for the reduction of forest fires; on improving weather forecasting; and on the development of a simplified, low-cost meteorological apparatus for use on farms.

Although little that is new in agricultural science has been produced under the Communist régime, major steps have been taken to train a more adequate supply of agricultural scientists and to build up the research institutes and experiment stations which are required if the agriculture of the country is to be modernised and new problems are to be met as they emerge. The adequacy of the institutes and stations and their staffs is not clearly evident, but the numbers of both institutions and staff members appear to be substantial. With few well trained agricultural scientists available at the outset, it seems probable that the government has had to depend upon crash training programmes, supplemented by some training in other Communist countries where the language barrier had to be overcome, so the workers now available may have training that is, on the average, below Western standards. However, there are twenty-nine agricultural colleges in the country, and other institutions are training students who can serve as assistants. A recent report indicates that about 3,100 to 3,500 students of agriculture are graduating each year from institutions of higher learning. So the corps of agricultural scientists is being strengthened.

The Chinese Academy of Agricultural Science, under the Ministry of Agriculture, is the focal point for the development and co-ordination of agricultural research. Policy making and the control of research operations are highly centralised, and quite a few of the research institutes have been set up in Peking. However, several have been located in the primary producing areas of the crops or livestock with which they deal. Specialised research institutes have either been established or are planned by the Academy for practically every major crop or group of crops and for the major types of livestock. The Academy also has six regional institutes, and it co-ordinates research in the agricultural colleges, and in a number of provincial institutes that are under its immediate direction. The Chinese Academy of Sciences also includes some agricultural research within its programme, but the Academy of Agricultural Science has a co-ordinating role with respect to it. Most provinces and autonomous regions have their own agricultural research establishments. Also, *hsien*, municipalities and communes have set up research and experimental facilities which further extend the organisational network for agricultural research.

The Chinese Communists have made bedfellows of the old and the

new, and of folklore and the findings of the laboratory in the development of agricultural science, as has already been pointed out in regard to plant protection and veterinary medicine. Also, scientists have gone to the villages to learn of the ways and problems of farmers and of their common beliefs. Farmers in the communes are encouraged to participate in experimentation and in other activities such as the selection of high producing varieties and the design of improved tools and implements. Thus, the scientists are brought close to the masses and the masses are encouraged to participate in science. The leaders apparently recognise that it will take a long time to develop and apply modern agricultural science in China; in the meantime they appear determined to use any native methods that are apt to be useful in increasing production, while at the same time moving ahead as rapidly as they can in the development of scientific agricultural research and its application.

In their efforts to push ahead with the application of modern methods, the Chinese Communists have made some mistakes either because of inadequate knowledge or because of a tendency to plunge into a campaign for a particular technique without considering all the consequences, and in some cases they have had to change direction. Examples are the difficulties with weed control owing to diversion of too much of the labour force; the apparent killing of too many sparrows and their replacement by bedbugs as one of the "four evils"; the ill-fated attempt to build and distribute a Russian-type plough that was not adapted to Chinese conditions; the building of many small fertiliser plants the outputs of which were very inferior in quality; the attempt to replace these fertiliser plants with small synthetic ammonia plants in which the cost of production is at least double that in larger plants; the over-emphasis on deep ploughing and dense planting; the attempt to use only the best land and let poorer land lie fallow; the effort to increase the two-crop rice area quickly without adequate late varieties or programming of the planting and harvesting of the early crop to accommodate a second crop; and the overall policy of first priority for industrialisation which recently had to be altered in favour of food production.

The U.S.S.R. has exerted substantial influence upon the development of agriculture and of agricultural science in Communist China. In addition to the technical and material assistance given since the new régime came to power in China, Russian scientists and economists have prepared at least two substantial volumes for publication in their own country, one on soils and the natural environment and one on the overall economy of China.

China is in urgent need of increases in agricultural production to meet the food requirements of a rapidly expanding population, to meet the needs of developing industries, and as a means of securing foreign

exchange through export. It seems certain, therefore, that the Communist leaders will continue to emphasise agricultural research and the early application of useful results. In view of the steps already taken to build up facilities and to train personnel for research, it seems equally certain that the flow of research results in Communist China will increase markedly in the years ahead. These results may be expected to relate primarily to the solution of the immediate problems of production in China.

Genetics

By C. C. LI

GENETICS is the science of heredity. In the Western world modern genetics has a history of nearly a hundred years, beginning with the discovery of laws of heredity established by Mendel in 1866. Then, early in the 1930s, a Soviet genetics emerged. The foremost proponent of this new science is the Soviet Academician and agriculturist Lysenko. Let me sum up briefly the differences between Western and Soviet genetics.[1] Modern genetics has established that hereditary material is located in the chromosomes of the nucleus of reproductive cells (sperms and eggs). This material is organised into functionally separate units called "genes." Hence, it is known as the gene theory or the chromosome theory of heredity. On the other hand, Lysenko and his followers believe that every particle of an organism plays a part in heredity; the particles assimilate the influence of environment and pass it on to the next generation. Thus, if an organism can be forced or trained to assimilate certain environmental elements, there will be hereditary changes in their offspring. Lysenko borrows the prestige of Michurin, a skilful and successful Soviet horticulturist by calling this doctrine Michurinism, while we refer to it as Lysenkoism.

On the ideological level, Lysenkoism is claimed to be consistent with dialectical materialism and progressive, patriotic and proletarian, while Mendelism is denounced as metaphysical, formalist, idealist, reactionary, mystical, bourgeois, and pseudo-scientific. In 1948, many competent Soviet scientists were liquidated or sent into labour camps for their failure to conform with the official science approved by the Central Committee of the Communist Party.

When the Chinese Communists took over mainland China in 1949, a similar controversy arose between the Chinese followers of Lysenko and conventional geneticists. The present article is not a historical review of all the events in China since 1949, but reports only some of the debates between the two schools of thought since 1956 when open discussions of this subject became permissible.[2]

[1] For a full and lucid discussion of the essential issues involved in deciding the legitimacy of Soviet genetics I cannot do better than refer readers to Julian Huxley's *Soviet Genetics and World Science* (London: Chatto and Windus, 1949).

[2] A summary of the work by Chinese Lysenkoists for the last decade may be found in Liang Chen-lan, "Achievements in Michurin Genetics in China, during the Past Decade," *General Biology*, No. 10, 1959.

The Tsingtao Genetics Conference

A conference, sponsored by Academia Sinica and the Ministry of Higher Education, was held in 1956 during the period of "blooming and contending" movement ("Let a hundred flowers bloom, and a hundred schools of thought contend") at Tsingtao from August 10 to 25. Although no complete official report or proceedings were published after the Conference, a number of articles based on texts of speeches delivered at the meetings, appeared in biology journals the following year. Apparently a large number of biologists, animal and plant breeders, and geneticists from all parts of China assembled there. Geneticists who had hitherto maintained complete silence were called upon to address the audience.

The significance of the Tsingtao Conference cannot be properly appreciated without a minimum acquaintance with the existing situation in Chinese biological circles. There were many devoted Michurinists in the Chinese Communist Party, but there was no personage comparable to Lysenko in political influence or in agricultural practice. In the early days of Communist regime, the leader of the Chinese Michurinists was Loh Tien-yu, an agriculturist trained in Japan, and President of the Peking Agricultural University 1949–50. However, he was soon reprimanded by high Communist officials for his ruthlessness, impatience and inability to co-operate with the old-type geneticists and plant-breeders.

From 1949 to 1956 the Michurinists were in control; the trained geneticists were silent, and their professional talents, so important to an underdeveloped country short of scientific manpower, were wasted. Apparently the Tsingtao Conference was called with the intention of remedying this situation. The Conference was neither in spirit nor in effect the counterpart of the Session of Lenin Academy of Agricultural Sciences of the U.S.S.R., July 31–August 7, 1948, which so startled the scientific world. The Chinese meeting was not sponsored by the Ministry of Agriculture, the stronghold of the Michurinists.

The timing of the Tsingtao Conference (August 1956) is interesting and worth noting. Two important events had occurred in the Soviet Union prior to this meeting. An All-Union Conference on Production of Hybrid Corn Seed had been held in March 1956; and Lysenko had been removed from his position as President of the All-Union Academy of Agricultural Sciences in April 1956.

That the Tsingtao Conference was wholeheartedly welcomed by geneticists may be seen from an account of it by Fong Chung-hsi immediately after the meetings.[3] Fong stressed the necessity of having such a conference because "we have committed dogmatism in following the Soviet Union and we have accepted Lysenkoism too uncritically." He was

[3] Fong Chung-hsi, "Some Thoughts Resulting from Attending the Genetics Conference," *General Biology*, No. 10, 1956.

gratified that participants were free to speak and that during the discussion no political accusations had been made. Although sometimes "red faces and red ears" were seen during the sharp debate, "friendship, however, has been increased." No resolutions were adopted by the Conference, but Fong said that several points had been clarified during the meetings. To paraphrase his own words, these were:

(i) The controversy between Michurinists and Mendelianists is not a struggle between materialistic and idealistic biology, as claimed by Lysenko. The difference between the two schools is a scientific problem, not a philosophical one, still less political. Morganists are not reactionary.

(ii) Morganistic genetics has never been "beaten down" by Lysenko. In fact, it has developed into a highly refined level far beyond chromosomology. It should not be discriminated against or prevented from further development.

(iii) There is some scientific justification for the theory of the unity of the organism and its environment, as claimed by the Michurinist school; and Lysenko's theory of the phase development of plants, though not perfect, is not without its merits. However, these should be further investigated, particularly by refined experimental methods.

(iv) The recognition of the possibility of directed cultivation does not exclude Mendelism, mutation, or random variation. Proper utilisation of existing variations can achieve the purpose of directed cultivation. A dictatorial attitude is harmful to the development of science.

(v) Vegetative hybridisation and the inheritance of acquired characters may be explained in various ways; none of the facts cited by Lysenko invalidates the chromosome and gene theory.

(vi) Darwin's theory of natural selection is still correct. Lysenko's contention that there is no competition within a species is not adequately supported by evidence.

Fong Chung-hsi is Professor of Biology, Shantung University, and author of a book entitled *General Genetics*.[4] What is unusual about Fong's case is that he was a Michurinist prior to the Tsingtao Conference and had written several articles supporting Lysenkoism.

Tan Chia-chen (C. C. Tan), known to many geneticists in the United States, like most others residing in mainland China, had successfully maintained a complete silence for seven years prior to the Tsingtao meetings. Dr. Tan said that he had not been doing research on genetics

[4] Published by the Chinese Science Press in 1956.

for the past few years, and that only in the last month had he begun looking over some material relevant to the subject; his purpose, he said, was to review the historical development of the gene theory.[5] In order to understand the very origin of the gene theory he expressed the hope that Mendel's *Versuche über Pflanzen Hybriden* might be translated into Chinese. His polite request was fulfilled; Mendel's work was then translated by Wu Chung-hsien and published by the Chinese Science Press the following year.

In his concluding paragraph, Tan wrote: "There is only one objective truth. The past division of genetics into Michurian and Morganist does not seem very appropriate. When there exist different theories in a science it can only be through continuous investigation and practice that it may be proved which is correct and which incorrect. It is also only through constant discussion that a science can develop and grow; science definitely should not rely on any outside force to settle whether or not a theory should be retained or discarded. It is for this reason that the Party and Government have now announced the policy of letting a hundred schools of thought contend. This policy has a meaning of special importance for problems of genetics . . . "

After the Genetics Conference at Tsingtao, many readers requested that *General Biology* publish some systematic accounts of Mendelian genetics, the teaching of which had been discontinued for the past six or seven years. Consequently, the editor-in-chief, Dr. Wang Chen-ju, a dendrologist and formerly Chairman of the Department of Forestry at the National Peking University, solicited a series of fifteen articles from Professor Li Ju-chi of Peking University, thirteen of which appeared, one a month, from March 1957 to March 1958. This was the first systematic account of Mendelian genetics in Chinese since 1949.

Dr. J. C. Li is, since the death of Professor Chen Cheng of Tsinghua University, the senior and most respected geneticist in China, and was certainly the right man for the job. This series of articles practically constituted a textbook for an introductory course in formal genetics. Dr. Li restricted himself only to the exposition of the principles of genetics and made no mention of Michurinism or Lysenkoism.

Wu Chung-hsien, an animal geneticist trained in England, is one of the few Chinese who are interested in what is loosely known as mathematical genetics. Statistics, biometry and experimental design have always been distasteful to the Communist authorities and Michurinists. In a speech at the Peking Zoology Society meeting held in November 1956,[6] Wu said that genetics being a quantitative science, the

[5] "On the Physical Basis of Heredity," *General Biology*, No. 1, 1957.
[6] Reproduced as "The Place of Genetics in Biological Science," *General Biology*, No. 3, 1957.

experimental results could not always be understood at one glance and had to be analysed mathematically. He held that the relationship between mathematical and experimental genetics was very much analogous to that between mathematical and experimental physics. He also emphasised the practical value of applied genetics to man—another subject extremely objectionable to Communist philosophy.[7] After having reviewed many of the outstanding advances in Western genetics, especially those in micro-organisms, he pointed out that research in modern genetics had already attracted a large number of biophysicists and biochemists. He continued: "Those who have scornfully regarded genetics as merely a play with the 3 : 1 ratio will find that those who should be laughed at are only themselves, because the little hut on the roadside yesterday has already become a towering skyscraper." Wu also called attention to the fact that radiation increased the rate of gene mutation, and said: "From the genetic viewpoint, we should resolutely oppose tests of nuclear weapons."

Chin Ehr-chang accused Mendelism of the following: "Dialectical investigation of the material basis of heredity obviously requires a constant study of Marxism-Leninism. . . . Both Mendel and Morgan, in studying heredity phenomena, have cut off the organism from its long history of development, and have thus fallen into the mud of idealism. . . . The great Michurinism is seeking the unification of the organism with its necessary living conditions."[8] Chin put great emphasis on the role of proteins and said that proteins combined and unified external living conditions and thus determined heredity. Towards the end of his article, however, he made a brief mention of the existence of nucleic acids, because some Soviet scientists doing research in this line had demonstrated the close metabolic relationship between nucleus and cytoplasm.

Chin was immediately replied to by Wu Ho-ling who pointed out that the methodology adopted in an experiment entirely depended upon what the experimenter wanted to find out.[9] Wu continued: "Mendel grows his peas under uniform conditions because he only wants to find out how the different traits of peas are manifested from one generation to the next under the given condition. In view of his purpose, how can we accuse him (Mendel) of ignoring the environment? It is the recognition of the influence of environmental factors that makes him grow the peas in a uniform condition." He concluded vigorously: "Conversely, if someone investigating the same problem as Mendel makes various

[7] See below, p. 151.
[8] "On What Constitutes the Physical Basis of Heredity," *General Biology*, No. 5, 1957.
[9] "A Discussion of the Article 'On What Constitutes the Physical Basis of Heredity'," *General Biology*, No. 7, 1957.

different crosses and has them grown under different conditions, that would be truly ignoring the environment." This type of discussion was impossible prior to the Tsingtao Conference.

Chen Shih-yang, an entomologist and a member of the Chinese Academy of Sciences, discussed the problems of speciation in some detail.[10] Well acquainted with Western work on evolution (Carter, Dobzhansky, Elton, Ford, Goldschmidt, Hovanitz, Huxley, Mayr, Stebbins, etc.), Chen nevertheless cited much Soviet literature to show that Lysenko's theory of evolution and his contention of no competition within a species were inconsistent with the observations and experiment experiences of scientists throughout the world.

Dzei Chung-ho and Cheng Kwang-tsao of Peking University suggested some concrete procedures for conducting experiments on exchanging egg whites in fowls, the most important of which was to have proper controls.[11] They emphasised that this was a new type of experiment and the problems were many and should be investigated by refined methods. One of these problems raised by them was: are such induced variations hereditary?

Neutrality and Counter-Attack

Some biologists were able to remain neutral though neutrality is almost as bad as opposition in Communist eyes. During and after the Tsingtao Conference these biologists spoke freely. Hwang Ho-chueh openly and sincerely advocated unification of the two schools of genetics at the meetings.[12] He said he was asking not for a temporary armistice but for active co-operation. His speech at Tsingtao was followed by two other papers, outlining concrete steps towards such unification. College curricula, he proposed, should include both genetics in a balanced proportion.

The Michurinists regarded the atmosphere of coexistence with the Morganists as detrimental to their morale. Especially after the launching of the anti-rightist campaign and the abandonment of "blooming and contending" in mid-1957, they began to counter-attack. Kiang Yu-nu regretted that after the Conference some Michurinists had themselves admitted that their theory was merely a dogma.[13] He consequently launched a vigorous counter-attack against the notion that the difference between the two schools of genetics was entirely a scientific one, reviving

10 "On Problems of Speciation," *Science*, No. 2, 1957.
11 "Some Methods in Experiments of Exchanging Egg-White in Fowls," *General Biology*, No. 7, 1957.
12 "On the Problem of Co-operation Between the New and Old Schools of Genetics," *General Biology*, No. 10, 1957.
13 "The Problem of the Nature of the Controversy between the Two Schools of Genetics," *General Biology*, No. 2, 1958.

the contention that it was fundamentally a philosophical issue of political importance. He said that even C. C. Tan in an interview,[14] had admitted that there was such a thing as the struggle between materialism and idealism in the natural sciences, and pointed out that: "To deny this is to reject the leadership of the Party in science." This was a very serious accusation indeed.

The debate between the Michurinists and the Morganists centred around plant breeding and only seldom touched on human genetics. In medical circles, which are remote from the influence of Michurinists, physicians apparently still carry on their own research work. Kiang Yu-nu, however, explicity brought the subject of human genetics into the arena.[15] He denied the existence of hereditary difference between individuals, denouncing the "superior race" concept and eugenics. Kiang was apparently unaware that no geneticist in this field believes in master race.

Further, Kiang apparently thinks that the existence of individual hereditary differences leads one inevitably to adopt the superior race concept. Actually, just the opposite is true. It is the large individual difference that makes the concept of superior race meaningless. Even the demonstration of racial differences is still far from constituting a proof that one trait is better than another.

Mi Ching-chiu of the Peking Agricultural College is an effective spokesman for the Michurinists. In a long, well-organised article, Mi reviewed the writings of Dobzhansky, Huxley, Kaplan, Schmalhausen, Simpson, Muller, Waddington, Goldschmidt, etc., and pointed out defects of each.[16] His conclusion was that mutation could not be the source of material for evolution. Mi did not ignore the fact that many plants are polyploidy but dismissed its significance, recalling that the basic number of chromosomes in rye, although usually taken as $n = 7$, may also be 8, sometimes even 9 or 10. Thus, "The change in chromosome number, more strictly speaking, is not the cause of variation but is the consequence of evolutionary change in a species. As to the cause of evolutionary change, we should look for it in the external environmental conditions."

Next, Mi asked the question: "What kind of variation is really the basis of evolutionary progress in a natural species?" His answer was: "During the process of development, the acquired (new) variation under the influence of unusual environmental conditions is called an acquired characteristic. The inheritance of acquired characteristics is not only possible, it is necessarily the case."

[14] *People's Daily*, August 12, 1957.
[15] Kiang, *op. cit.*
[16] "A Critique of the Mutation Theory of Evolution of Modern Darwinism," *General Biology*, No. 1, 1960.

Mi is one Michurinist who gives attention to methodology, noting that all the classical experiments disproving the inheritance of acquired characteristics have shortcomings. For instance, Weissman cuts off the tail of new-born mice for twenty-two generations and yet the tail is still there. "Such experiments can only prove that a mechanical injury does not scar offspring and cannot at all prove that variations induced by metabolism are not hereditary." Likewise, Johannsen's selection experiment with the Princess variety of garden bean is also condemned: "In comparing the results, he should have grown the big beans in a condition suitable for the development of big beans, and the small beans in a condition suitable for the development of small beans. Moreover, he practised mass selection. Should there be a single plant that shows induced variation, it would be ignored. Therefore, Johannsen's experiment cannot disprove the inheritance of acquired characteristics."

Mi pointed out also the second broad category of mistakes in interpretation, citing pieces of evidence which, to him, show inheritance of acquired characteristics; and alleges "the geneticists have invented all sorts of explanations to conceal the truth." It was Mi who criticised Fong Chung-hsi for being a turncoat.

Mi, different from most other Michurinists in several respects, is familiar with Western, Russian and Japanese literature. (One slip he makes, however, is in thinking the normal number of chromosomes in man is still forty-eight.) He writes clearly and systematically. He gives attention to methodology in analysing experiments. Using only a minimum of political arguments he is a formidable Michurinist.

Ho Ting-chieh, in a long article, angrily denounced everything established by geneticists and branded their entire theoretical framework as absurd.[17] He questioned the significance of meiosis in sexual reproduction, and cited parthenogenesis as a solid proof of the fallacy of the chromosome theory of heredity. His concluding paragraph was:

> "Lift high Michurin's banner. Clear up all metaphysical and idealistic things in biology. Let biological theory belong entirely to the realm of dialectical materialism. Let biology be a science for building Socialism and Communism. Let it be a weapon of struggle against Nature, so that it may be fully qualified to be included in the arsenal of Marxism-Leninism. Now is the time (to do it)."

In Chinese literature on genetics and breeding Soviet results are often quoted as infallible truths. Most frequently quoted is Lysenko's *Agrobiology*, but many other Russians have also been cited by the Chinese. The attitude of "Engels said" and "Lysenko said" reminds

[17] "The Historical Origin of Gene Theory and its Metaphysical Quality," *Journal of Natural Science* (Wuhan Un.) No. 1–16, 1957.

one of the older "Confucius said." If "feudalism" can be abolished in Chinese science, greater progress may be expected in the next decade. But the prestige of Russian textbooks in higher institutions is not as great as in the early days of Communist rule, since Chinese professors now feel that some were not entirely up to date; and since the Genetics Conference at Tsingtao the two schools of genetics have been in a state of coexistence.

Medicine and Public Health

By WILLIAM Y. CHEN

In order to cope with the demands of national industrialisation and reconstruction, much attention has been paid in Communist China to public health and medicine in an effort to prevent disease and promote health and thus increase productivity. Since public health practice is closely related to the political system and governmental structure, in addition to indicating actual achievements it serves as an indirect reflection of political and socio-economic conditions in present-day China.

It is the primary intention of the present writer to make a critical evaluation of the achievements in medicine and public health in China during the past decade rather than a thorough review of the literature covering these areas. Most Chinese and English publications published in China have been examined as well as reports from non-Chinese sources. Besides this, achievements and new developments unfamiliar to the western world and the overall future trends of medicine and public health in China will be discussed.*

Medicine and Public Health in Pre-Communist China

In order to reach a better understanding and a clearer concept of medicine and public health in Communist China today, it will be helpful to examine briefly the situation in this field in pre-Communist China.

Before the Communist régime took control in China in 1949, medical and public health organisations were still in their infancy and far below modern standards. Poverty and disease were the rule. For example, the general death rate in Peking was as high as 14·1/1,000. Over 75 per cent. of the population was illiterate. The total number of scientifically-trained doctors was estimated to be only 12,000 for about 500 hospitals; the country was only capable of producing 500 medical graduates per year for an estimated population of 400,000,000!

* The main sources of information for the preparation of this article were the various medical and public health journals, published both in Chinese and English during the past ten years. The *Chinese Medical Journal* of the Chinese Medical Association has a complete English edition. Many other medical journals of different specialities print English abstracts. Scattered English translations of Chinese medical publications have been published by the U.S. Department of Commerce in the past two years. They are valuable for scientists who might be interested in the details of articles in their own fields.

In his *China's Health Problems*, Sze [1] described how China planned to combat the excessive mortality of 4,000,000 a year due to infectious and parasitic diseases and how to provide the necessary facilities for the daily treatment of about 60,000,000 patients. Because 84 per cent. of the total population in the rural areas was incapable of paying for private medical care, the only early solution of such a tragedy was believed to be a system of state (or socialised) medicine as planned by Lim and Chen.[2]

As early as 1939 promotion of a new *hsien* or county health centre system had been started and by the end of World War II there were some 1,775 county health centres, 26 provincial medical centres, 125 provincial hospitals, 307 missionary and other private hospitals. There were 15 national, 5 provincial, and 10 private medical colleges, 5 pharmacological schools, 3 dental schools, 22 mid-wifery schools, and 317 nursing schools. The county health centre is comparable to the county health department in the United States; but the practice of preventive medicine, public health, and medical care was all combined under one governmental authority thus differing from the American system. Generally the centre had the following functions, namely: (a) general administration, (b) medical care, (c) epidemic prevention, (d) environmental sanitation, (e) maternal and child health, (f) health education, and (g) vital statistics.

Organisationally China was more unified after V-J Day, and the centralised national government exercising its authority over health problems in all provinces was stronger than ever. The idea of the county health centre system was planned, shaped and conducted mostly by American-trained doctors; many of them are now still living in China and, in fact, form the backbone of China's medical and health structure.

Dr. Grant in his "Western Medicine in Pre-Communist China" [3] gives a brief but very precise history and background of western medicine in China during the last half century. American influence in the development of western medicine was particularly great and worth mentioning. The Rockefeller Foundation organised a China Medical Board in New York City in 1915 and supported the well-known Peking Union Medical College (PUMC). During World War II, China owed much of its development of medical relief and educational work to the American Bureau for Medical Aid to China (ABMAC). A conference on the medical situation of China at that time was called by ABMAC with the aim of furthering help to China in her medical reconstruction after the war. Ambitious national health and medical educational programmes

[1] Sze, S. M., *China's Health Problems* (Washington: Chinese Medical Association, 1944).
[2] Lim, R. K. S., and Chen, C. C., "State Medicine," *Chinese Medical Journal*, 51: 781–796, 1937.
[3] J. B. Grant, "Western Medicine in Pre-Communist China," *Journal of American Public Health*, 50(6):36–39, Supplement to June issue, 1960.

in the form of five, ten, and thirty year plans were worked out in detail by the Chinese medical and health leaders.[4]

Medicine in China Today

A. *Medical Education*

(1) Emphasis on Quantity

Owing to the shortage of physicians and other medical personnel, emphasis on medical education in the past ten years has been on quantity rather than quality. Mass production of medical personnel of various levels has been the theme. It has been claimed that during the last decade more than 40,000 graduates came out of medical and pharmacological schools. This figure is nearly four times the total number of graduates from 1928 to 1947. Graduates from secondary medical schools and secondary public health schools, which only provided two to three years' training, numbered more than 153,000. Various auxiliary educational methods have been used to increase the training of such workers. In tune with its over-all national policy that education should serve the working people, much political training was enforced in medical schools, perhaps to the point of being detrimental to professional training.

It is a tremendous undertaking to train the number of medical doctors and to establish the number of hospitals to cope with the needs of a huge population like China's. Calculating on a basis of only one doctor per 1,500 population, it would require 266,000 doctors for 400,000,000 people estimated before Communist rule. If we take a minimum standard of five hospital beds per 1,000 population, 2,000,000 hospital beds would be required at a time. With the population estimated at the 600,000,000 claimed by the Communist government today, there should be an increase of 30 per cent. over these figures. Even in America today one is confronted with a shortage of medical doctors and some top-grade medical schools have already started new medical educational programmes to shorten the training and reduce the cost of tuition. It is easy to understand why the Communists have preferred mass production to individual craftsmanship.

(2) Improvement of Quality

There has been little emphasis on the quality of medical education during the past ten years. This has been a ground of constant criticism by visitors to China, and has encouraged the growth of a belief that the Communist government has sacrificed the quality of medical education for quantity. Some even feel that there may be a danger of scientific

[4] Report by American College of Physicians and Surgeons, Conference on the Present Medical Situation in China, called by the American Bureau for Medical Aid to China, Inc., N.Y.C., June 15, 1946.

" retrogression ".[5] Although the idea of quantity versus quality is subject to argument, the fact remains that much progress has been achieved in the field of preventive medicine and public health. The real test for the future will depend upon whether the Chinese Communists follow their original line or, realising their own shortcomings, change their direction.

It has been announced recently in the *Chinese Medical Journal* that a new medical college has been established in Peking. This new college, called China Medical College, offers an eight-year medical course instead of short-term training. Three years will be devoted to basic sciences, two years to basic medical knowledge, two years to clinical medicine, and one year to practical field experience. English and Russian are the two compulsory languages required in this medical college. Many senior research specialists of the Chinese Academy of Medical Sciences and professors of the former Peking Union Medical College will be on the staff.

One piece of the evidence that they realise the importance of quality as well as quantity is the establishment of this new eight-year medical college. There are other examples, including the achievements of the Chinese Medical Association. This Association was in existence in Nanking as far back as forty years ago; under the Communist régime it was moved to Peking. By the end of 1958 membership had increased from the 4,000 of pre-Communist days to 18,472. There are altogether 16 professional societies within the Association and 54 branch associations throughout the country. A new five-story headquarters with a sizeable medical library was built for the Association in Peking in 1957. The Association's activities have increased every year and many important national conferences have been sponsored jointly with the Ministry of Health. Publication of medical journals and books is also an important part of its work. Twenty-five major medical journals are now being published and more than 1,200,000 copies are circulated. It has been reported that there are 422 journals in thirty countries which have exchange agreements with the Association. Much work in the field of medical research has also been encouraged by the Association and will be discussed later.[6]

(3) Integration of Traditional Chinese Medicine and Western Medicine

In order to cope with the task facing them, the Communists were desperately in need of medical manpower. One realistic way to accomplish this was to make use of thousands of " traditional " Chinese doctors throughout the country. It has been reported that there are still

[5] T. F. Fox, " Medical Care in Communist China Today," *Journal of American Public Health*, 50 (6):28–35, Supplement to June issue, 1960.

[6] Fu, L. C., " Achievement of the Association in Past Ten Years," Chinese Medical Association, *Chinese Medical Journal*, 79:208–218, September–October 1959.

370,000 such doctors today. These doctors are not scientifically trained but are of the native empirical school using Chinese herbs and drugs and healing methods based upon ancient Chinese medical theories. The supplemental use of the traditional doctor was definitely frowned upon by conventionally trained Chinese doctors, and many difficulties resulted from the objections of the latter.

Yet the Communist government was determined to carry out this policy, and re-emphasised the need of " co-operation between traditional Chinese and western medicine to promote people's health," to quote the Vice-Minister of Health, Hsu Yun-Pei.[7] He stated that " the Chinese Communist Party has always advocated the unity of traditional Chinese medicine and western medicine in order to fully develop the medical heritage and to advance medical science in China ". It was repeatedly emphasised that as early as 200 B.C. the earliest Chinese Canon of Medicine (the *Nei Ching*) was published. From that time on several thousand volumes of Chinese medical writings have been handed down from generation to generation. Thousands of Chinese herbs and drugs have been in use for several thousand years. Empirical physical treatments, such as acupuncture, moxibustion, massage, and breathing exercises have been widely practised for centuries.

At the end of 1958 the Ministry of Health officially enforced the full-time study of Chinese traditional medicine by western-trained Chinese medical doctors. It has been reported that by the end of last year, 2,100 doctors had been enrolled in thirty full-time classes to study Chinese traditional medicine. In addition, many institutes and schools of traditional Chinese medicine have now been established to train qualified new traditional-style doctors, giving them simultaneous instruction in scientific medicine. In 1958 3,200 such students graduated. The present situation is that a department of traditional Chinese medicine has been established in most of the larger hospitals and that a considerable number of traditional doctors are on the staffs of county and commune hospitals. It is obvious that the integration of traditional medicine and western medicine is growing stronger rather than weaker. Whether it will result in the deterioration of the quality of medical education in China still remains to be seen.

(4) Practical Field Education

As a result of the over-all educational policy of going-to-the-countryside, all professional teachers and students must go to the rural areas and factories to work together with the farmers and workers to gain practical field experience.[8] They must live with the patients and work

[7] Hsu Yun-pei, Vice Minister of Health, *Chinese Medical Journal*, 79:489–492, December 1959.
[8] Tsui, Y. T., *Chinese Medical Journal*, 46:1–3, January 25, 1960.

with them, eat the same food, and live the same lives. In this way, the Communist government feels it can make the medical workers serve the people in the best way, help promote their productivity and strengthen the commune system. This policy considerably corrected the concentration of medical personnel in the big cities—a phenomenon also visible in most countries of the non-Communist world today. In general, during every school calendar year, 38 weeks are ear-marked for teaching, 6 weeks for vacation and holidays, and 8 weeks for practical field work. The question is whether this compulsory regimentation of doctors will prove to serve the people well.

(5) Publication of Medical Books and Journals

All important medical books and journals have been published by the " People's Medical Publisher " in Peking since 1953. At the moment there are 77 medical and health periodicals published throughout the country. The *Chinese Medical Journal* is published monthly in both Chinese and English editions. The monthly editions of the *Chinese Journal of Internal Medicine* and the *Chinese Journal of Surgery* have English abstracts. Such bi-monthly publications as the *Chinese Journal of Pediatrics*, the *Chinese Journal of Ophthalmology*, the *Chinese Journal of Dermatology*, the *Chinese Journal of Radiology*, and the *Chinese Journal of Neurology and Psychiatry* all have English abstracts. The *Chinese Journal of Pathology* is a quarterly publication which also includes English abstracts. Two monthly scientific publications in English, the *Scientia Sinica* and *Science Record*, eight quarterly *Acta Experimentali in Biologica Sinica* are published by the Chinese Academy of Medical Sciences. The Central Research Institute of Health is responsible for the preparation of the widely read monthly publication *People's Health*, which was formerly part of the *Chinese Medical Journal*. (The National Library of Medicine of the United States Public Health Service (formerly Army Surgeon General's Medical Library) has a good collection of such periodicals available for reference.)

B. *Progress in Medicine*

(1) Infectious and Parasitic Diseases

Since the Communist Party took over China, greater strides have been made in the improvement of sanitation, health education and prevention and control of common infectious and parasitic diseases.[9] Hand in hand with public health work, clinical medicine is claimed to have contributed to the total disappearance of cholera in China. Plague and smallpox are said to have been eradicated. Typhus, relapsing fever and

[9] Hou, T. C., *et al.*, *ibid.* 79 (6):493–520, December 1959. See also article cited in footnote 7.

other "notifiable" or "reportable" infectious diseases have been brought under control. Great improvements have been made also in the control of major parasitic diseases. The number of victims of schistosomiasis was up to 10,000,000 persons at one time. It has been reported that 4,000,000 such patients have been cured and many areas freed from the disease.

Millions of malaria patients have been treated and its incidence rate has apparently dropped to less than a 3 per cent. level. Filariasis has been practically eradicated from 38 districts and municipalities and 2,600,000 patients have been cured. The number of kala-azar patients has dropped from 530,000 to 10,000 within the last ten years. Hook worm infection (Ankylostomiasis) is still wide-spread in the country. It has been reported that more than 36,000,000 patients have so far been cured.

The mortality rate of tuberculosis has also dropped rapidly. For example, TB declined from 230 per 100,000 in 1949 to 46 per 100,000 in 1958 in Peking. Syphilis and gonorrhoea are no longer menaces to health due to the proper practice of personal hygiene and effective treatment.[10]

The study of Japanese B encephalitis has been very extensive. Treatment for Japanese B encephalitis with traditional Chinese medicine has been claimed to be better than modern therapy.[11]

Much work on influenza has been done in the past few years, especially since the 1957 influenza epidemic. An All China Influenza Conference was called and one central and several regional influenza research laboratories were established at that time. Many strains of virus were isolated and identified as Asian Type A during that epidemic. According to the available data, the epidemic appears to have started from the Yunnan—Kweichow border in south-western China. Polio virus, adeno virus, and coxsackie virus also have been isolated and studied.

(2) Cardio-vascular and Renal Diseases

The relative incidence of rheumatic heart diseases is the highest (30 to 50 per cent.) among all organic cardio-vascular diseases. Hypertensive heart disease ranks next, being 20·1 to 20·3 per cent., while arteriosclerotic heart disease constitutes only 4·6 to 15·5 per cent.[12] Investigation among samples of population in Peking showed that the incidence of hypertension was about 5 to 6 per cent. This indicates that the incidence of hypertension in China is not much different from

[10] "Progress in Internal Medicine in New China," *Chinese Medical Journal*, 79:217–252, 1959.

[11] Chou, H. C., "Epidemic Type B Encephalitis," *Chinese Medical Journal*, 80:548–553, June 1960.

[12] Tung, C. L., *et al.*, *Chinese Journal of Internal Medicine*, 7:109, 1959.

that in other countries. A number of Chinese herbs and acupuncture therapy have been tried in the treatment of hypertension and reported to have had good effects.

(3) Diseases of the Digestive System

Infectious hepatitis has been the subject of much investigation. Fairly extensive autopsy material in Canton has shown that post-necrotic cirrhosis constitutes 23·6 per cent. of the clinical cases of liver cirrhosis.[13] Recently some preliminary success has been reported on the isolation of infectious hepatitis virus with chick embryo. For palliative treatment of ascites in liver cirrhosis, a combination of western medical treatment and traditional Chinese medicine has reportedly kept many patients free from abdominal fluid for as long as 18 months.[14]

(4) Diseases of the Respiratory System

Among the diseases of the respiratory system, pulmonary tuberculosis is still the most common. Treatment by traditional Chinese medicine in combination with modern drugs has been tried extensively, reportedly with good results. Several herbal drugs have also been used in the treatment of bronchial asthma.[15]

(5) Endocrine and Metabolic Diseases

Goitre is an important endemic disease in China. Much survey work has been done and preventive measures taken. Besides the deficiency of iodine, high calcium and low magnesium content in the drinking water in two areas has been noticed.[16]

(6) Occupational Diseases

Extensive medical and industrial health work has been done to check the widely prevalent silicosis, and much progress in its diagnosis and treatment has been related. As an early diagnostic aid of silicosis studies have been conducted to discover early neurological manifestations.

(7) Surgery

Progress in the field of surgery has been rather slow. During the past ten years China has concentrated on establishing surgical facilities in many hospitals. However, many surgeons have acquired considerable experience in modern surgical techniques. Anaesthesiology has become a well-recognised speciality and new techniques have been adopted. It has been reported that in a series of 1,785 cases of acute perforation of gastro-duodenal ulcer, 38·2 per cent. were treated by gastric resection

[13] Liang, P. C., *National Medical Journal of China*, 42:801, 1956.
[14] Chiang, C. H., *et al.*, *Chinese Journal of Internal Medicine*, 44:659, 1958.
[15] Pang, C. Y., *Peking Traditional Chinese Medicine*, 3 (11):29, 1954.
[16] Han, S. C., *et al.*, *Shansi Medical Journal*, 2 (4):10, 1958.

with a mortality rate of only 2·6 per cent. and an ulcer-recurring rate of 2·4 per cent.[17]

(8) Other Progress

Some progress also has been noticed in other fields such as neurology,[18] obstetrics and gynaecology,[19] radiology,[20] and otolaryngology.[21]

C. *Traditional Chinese Medicine*

Traditional Chinese medicine is an empirical healing art based on 4,000 years of practical experience. Its simple concept of health and disease is the functional bodily harmony or disharmony between two forces, Yin (the negative) and Yang (the positive). Anatomically and physiologically, traditional Chinese medicine has practically nothing to offer; yet the vast volumes of herbs and drugs and medical treatises recording observations of diseases are precious. The results of the use of these drugs and the healing art of acupuncture, moxibustion, massage, and breathing therapy certainly have their empirical value. Discussion of Chinese herbs and drugs is in the field of pharmacology, and only acupuncture, which is quite a controversial subject, will be discussed here.

Acupuncture is a healing art peculiar to China. It was practised as early as 200 B.C.[22] It consists of the introduction of hot and cold needles into the body at specific points. The needles may be either fine or coarse, short or long (from 3 to 24 cm.). The application is based upon the old Chinese medical theory that internal organs and different body parts are intimately related and work in harmony for the maintenance of health. These organs and body parts are hypothetically connected by twelve channels (*Ching*). When the needles puncture and stimulate different tissues or organs at various depths, they cause physiological reactions and thus produce healing results. Practising acupuncture in ancient times was dangerous owing to ignorance of aseptic techniques and the lack of anatomical knowledge.

Acupuncture was carried from China to Japan at an early period but was not introduced to Europe until later. At one time it aroused considerable interest in Europe, especially in France. Remusat published

[17] Chen, T. Y., *et al*, *Chinese Journal of Surgery*, 4:134, 1956.

[18] Feng, Y. K., "Neurology in New China," *Chinese Medical Journal*, 79:398–408, November 1959.

[19] Lim, K. T., "Obstetrics and Gynaecology in the Past Ten Years," *ibid.*, 79:375–383, November 1959.

[20] Wang, S. H., and Lin, K. N., "Present Status of Roentgenology," *ibid.*, 79:446–455, November 1959.

[21] Editorial Board, "Chinese Journal of Otorhinolaryngology, Otolaryngology in China Since Liberation," *ibid.*, 79:423–427, November 1959.

[22] Wong, K. C., and Wu, L. T., *History of Chinese Medicine* (Shanghai: Mercury Press, 2nd ed., 1956), 227–232.

a long analysis for and against this practice at the beginning of the last century. Later Sir James Cantlie tried it successfully in several cases of rheumatism and sprains. Morant and Ferroyrolles contributed a review of its history and application. In 1956 the Russians sent a group of doctors to Peking to study the art of acupuncture. At present intensive studies on the unknown mechanism of acupuncture are being conducted in Moscow by Soviet and Chinese doctors. The hypothesis is that stimulation from punctures is conducted from the peripheral nerves to the brain cortex and suppresses pathological irritation in the brain. Such an explanation seems to be in harmony with the Pavlovian theory of conditioned reflex. Acupuncture has been widely used in practically all kinds of diseases ranging from surgical conditions such as appendicitis to chronic conditions such as diabetes. It is believed that it produces best results in illnesses of the nervous system or those of neurological origin. Good results have been reported in the treatment of facial paralysis, arthritis and eczema. One Russian physician reported that his long history of miserable arthritis was much improved by acupuncture.[23] A doctor from India who went to China and studied acupuncture in 1958 entertained certain doubts as to its value at first. However, he believed afterwards that the integration of traditional medicine and western medicine had already accomplished remarkable success. He was also treated successfully by acupuncture for his acute sinusitis.[24]

Dr. Wu Lien-teh, the great plague fighter,[25] during the severe Manchurian plague epidemic half a century ago, said in the preface of his book *History of Chinese Medicine* that " Chinese medicine, to be understood and its significance appreciated, must be studied as one whole. In no other field of endeavour in this country (China) has the experimental method realised such concrete and far-reaching results as in the domain of medicine."

Whether the Communists will succeed in their ambitious endeavour to produce a new Chinese medical science by incorporating traditional medicine with modern scientific medicine only time can tell. Whatever the outcome, its development is worthy of our constant attention.

Public Health in China Today

A. *Preventive Medicine and Sanitation*

Most visitors have noticed that China has achieved great success in preventive medicine and sanitation, in stamping out many major infectious and parasitic diseases during the past ten years. This has resulted in the decline of the general death rate in Peking from 14·1 to 7·4 per

[23] *Kiangsi Traditional Chinese Medicine*, December 1958.
[24] Basu, B. K., " My Impression of Acupuncture and Moxibustion," *Chinese Medical Journal*, 78:580–581, June 1959.
[25] Wu, L. T., *Plague Fighter* (Cambridge: Heffer, 1959).

1,000 during this period. The first step the Communists took was to start a campaign to eliminate the four major pests, that is, mosquitoes, flies, rats, and grain-eating sparrows. They integrated public health work with mass action by means of the so-called " patriotic health movement." Millions of people were mobilised to kill these four pests throughout the country with all available anti-vermin chemicals and devices including manual swatting of mosquitoes and flies and attacks on rats and sparrows with sticks and stones. They not only mobilised adults but also utilised the aged and the very young. Under these conditions of all-out war launched by millions of human beings against vermin and birds, the humans finally won and were able to prevent and control many communicable diseases spread by these vectors. It has been reported that in 1959 over a billion sparrows, one and a half billion rats, 100,000,000 kilograms of flies, and 11,000,000 kilograms of mosquitoes were eliminated. It was reported that many sparrows which were not actually killed by shooting or striking but which were constantly chased by people hour after hour finally died of sheer exhaustion.

It has to be pointed out that such concerted mass action was made possible by the effectiveness of Chinese Communist organisational techniques. The street committees served as the basic units in the implementation of government orders on public health.

The improvement of general environmental sanitation and the practice of personal hygiene, both in the cities and in the rural areas, is also reported to be phenomenal. Rivers and streams have been drained and irrigation improved. Countless old refuse dumps and stagnant pools have been transformed into parks and recreational areas. Reconstruction of slums is another area of interest to the Communists. Much attention is being given to research on various sanitation problems ranging from the disinfection of well water and the washing and cooking of vegetables to the effect of heat on factory workers and climatic influences on infant mortality.[26]

B. *Medical Care*

(1) Philosophy

The practice of medical care in China today may be said to be a modification of Russian " socialised medicine." However, patients do pay small fees to hospitals, clinics or health centres. Usually very small fees are charged for doctors' services but more substantial ones for expensive drugs, X-rays and surgery. The trend at present is to provide more hospitals and clinics in order to render more free medical care to the people. This has already started with the so-called " privileged

[26] Yang, C. P., "The Influence of Winter Upon the Mortality Rate of Infants in Harbin," *People's Health*, 11:1003–1006, November 1959.

groups" in most cities. It has been reported that there are at present 300,000 hospitals and clinics with more than 400,000 hospital beds and 1,400 anti-epidemic stations throughout the country. Recently it has been claimed that 700,000 industrial workers, 360,000 teachers and university students and government workers in Peking alone are receiving such free medical services. In Shanghai the same privilege has been given to 1,160,000 workers, 280,000 teachers, students and government workers. More than 1,000,000 dependants of factory workers receive the privilege of paying only half of their medical expenses.

It is quite obvious that in China medical doctors do not have the freedom of medical practice that medical doctors have in the West. All doctors, nurses, technicians, sanitarians and other health workers are government employees and are paid set salaries by the hospitals or health agencies. Although private practice still exists in some big cities, its scope is negligible. Restrictions set by government regulations on fees make it impossible for practitioners to earn greater incomes.

In various city and country resorts, hundreds of sanatoria are now available free of charge for those privileged groups mentioned above. Hundreds of beautiful villas in the famous seaside resort of Tsingtao, which was formerly used exclusively by warlords and rich businessmen, are now used by national "model" workers, combat heroes, scientists, doctors, professors, writers, artists, opera singers, waiters, cooks, shop assistants, drivers, railroad conductors and nurses.[27]

(2) Three-Level System

The medical care system is divided into three levels [28]:

The primary or lower level medical care starts in the municipal clinics in cities and in county health centres in rural areas. Patients are seen by ordinary or traditional doctors for general diagnoses and primary treatments on three eight-hour shifts. When doctors are not immediately available for house calls, emergency first-aid treatment is rendered by nursing aides or health aides in the villages. At the secondary or middle level, medical care is given at better-staffed and better-equipped county or district hospitals. These hospitals have a bed capacity of between 200 to 300 to handle specific medical or surgical cases. For general public health work, the county or district health department is responsible with the assistance of one or more anti-epidemic stations. These stations are charged with laboratory work and preventive medicine and health education responsibilities. The top or third level medical care consists of highly specialised hospitals or health institutions operated by big municipalities, provincial governments or medical colleges,

[27] *Chinese Medical Journal*, News, 7 (6):568, December 1959.
[28] *People's Health*, Vol. 4, April 1960.

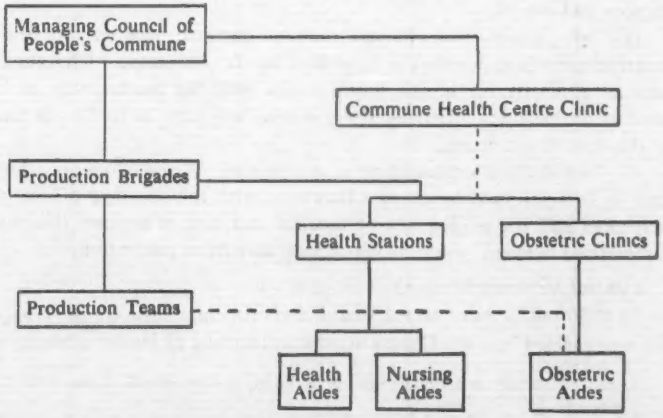
similar to big medical centres in the United States. The general public health responsibility at such a level rests with the health department of the provinces or special municipalities. They are under the direction of the Ministry of Health of the Central Government.

(3) Medical Care in "People's Communes"

Within the commune system there are medical and health installations, mess halls, kindergartens, nurseries, gynaecological and obstetrical hospitals, and homes for looking after the aged. Let us examine an apparently typical commune. In the rather hilly countryside of north China, there is a county called Mee Hsien which has recently developed into a prosperous coal-mining area with various small industries. It is composed of seven communes with varying populations. One of these communes has a population of 40,121 which is divided into 17 "production brigades." Each production brigade is subdivided into 4 to 10 "production teams."

Each people's commune has a managing council which controls all production brigades as well as supervises the functions of the medical and health agencies. The medical and health agencies include a commune health centre clinic with several health stations, obstetrical clinics and many health aides, nursing aides and obstetric aides. Their organisation and functions are as follows:

Basic Medical and Health Organisations
of
a People's Commune



(a) The commune health centre clinic has a staff of forty-three, including nine ordinary doctors, seven traditional doctors, ten nurses, eleven technicians, three administrators, two public health personnel, and one maternal care nurse. There are twenty-five simple-type hospital beds at this clinic, calculating on a hospital bed and population ratio of 0·6/1,000.

(b) There are seventeen production brigades in this commune and each production brigade has a health station. The health station, however, is directly under the administrative direction of the head of the production brigade, while the director of a health centre clinic has only technical responsibility. There are three to four ordinary modern or traditional doctors at each station. They serve an area of about a three- to four-mile radius covering eight to ten natural villages, and provide out-patient care at the station and make emergency house visits whenever called upon.

(c) There is a maternity and child health nurse at each health centre clinic, and she is responsible for maternity and child health problems within the commune system. Each production brigade has one obstetrical clinic with an experienced obstetrical aide to assist the doctors. At present it is claimed that 60 per cent. of all babies are delivered by scientific methods. In the larger cities reportedly it has reached as high as 98 per cent.[29]

(d) The need for nurseries and kindergartens depends upon the activities within the production teams. During busy seasons of the year, usually there are many nurseries established on a temporary basis. In each production team there are health aides, nursing aides, and obstetrical aides working in their respective fields under the supervision of the doctors and nurses.

(e) All patients are charged nominal medical fees at the health centre clinic which is entirely supported by the commune. Charges for services given by the health stations vary with the productivity of the production brigades. Usually the patients only pay 30 to 50 per cent. of the cost of medicines.

(f) The medical organisation in a commune is analogous to a basic unit in an army medical corps However, with the shortage of medical personnel and the inadequacy of medical facilities, it appears that such a socialised medical system is still a long way from realisation.

C. *Central Research Institute of Health*[30]

In 1950 the former Central Health Experimental Institute in Nanking was reorganised into the Central Research Institute of Health and moved

[29] Li, S., "Maternity and Child Welfare in People's Communes," *Chinese Medical Journal*, 78:576–579, June 1959.
[30] Shen, C. C., *Chinese Medical Journal*, 57 (7):680–698, July 1956.

to Peking. It is mainly concerned with research directly or indirectly related to people's health. It consists of six departments, namely, microbiology, sanitary engineering, nutrition, pathology, pharmacology, and Chinese herbs. It has a branch institute in Nanking entirely devoted to the investigation of parasitic diseases and a branch institute in Hainan Island studying malaria. At present there is a staff of more than 250 scientific research workers.

Much of its investigation in the department of sanitary engineering is on the problem of general sanitation and industrial ventilation and cooling. Many experiments have been conducted on the use of natural raw materials to produce insecticides such as DDT, 666, etc. Investigation of various parasitic and infectious diseases such as schistosomiasis, malaria, etc., conducted or sponsored by this Institute have been reported above. Much research has been done on the nutritional value of wild vegetables in respect of their vitamin content. The study of milk substitutes, using beans, rice and other food-stuffs, has been pursued intensively. Much of the pharmacological research has been in the synthetic production of native antimalarial and anti-TB drugs. Recently the study of the human physique has become more important as part of the effort to promote better physical health and to meet the needs of national defence and production.

D. *Cancer Prevention and Control*

Having been successful in combating infectious and parasitic diseases, the Communists have also realised the importance of preventing and controlling chronic diseases. Recently they launched a vigorous anti-cancer campaign.[31] Although their achievements in cancer research have not been of great significance, yet the scope of this problem in a country with such a vast population warrants our attention. Mass detection of cancer, especially of the uterus and cervix, oesophagus and naso-pharangeal cavity, was started in 1958, and more than 4,000,000 people have been examined in thirteen provinces and cities. It has been reported that cancer of the cervix ran the highest (90·8 per cent.) of all cancer in Shanghai. Cancer of the oesophagus was more prevalent in northern China than elsewhere, while cancer of the naso-pharangeal cavity was higher in the south.[32] Of particular interest is the detailed analysis which revealed that the incidence rate for cancer of the oesophagus among 3,100,000 persons surveyed in northern China in 1959 was 18·3/100,000 and the mortality rate was 16·2/100,000.[33] The Department of Pathology of the Chinese Academy of Medical Sciences has also made a

[31] Chien, S. C., "Prevention of Cancer and Cancer Research," *Chinese Medical Journal*, 46(1):8–14, January 1960.
[32] Yu, A. F., and Ko, Y. K., *Chinese Medical Journel*, 80:21–27, January 1960.
[33] *Chinese Medical Journal*, 80:459–465, May 1960.

statistical analysis of 13,779 surgical specimens seen during the last forty years. The data showed that the percentage of oesophageal cancer was 4·7 per cent.[34]

The Communists have also paid great attention to the problem of liver cancer. Thirty-eight medical colleges have conducted intensive investigations of this problem. In a review of 21,706 autopsies from January 1950 to June 1957, 1,979 were diagnosed as malignant tumours. Liver cancer was reported to be 1·2 per cent. of all autopsies which constitutes 26.4 per cent. of all cancers.[35]

Bronchogenic carcinoma was reported to be 18·4 per cent. of all tumour autopsies. Some investigation on lung cancer-cigarette relationship has been conducted and led to the belief that cigarette smoking is not the only aetiological factor, and reported that a high percentage of lung cancer occurred among permanent rural residents.[36]

Medicine and Public Health in Formosa Today

Although this article is concerned primarily with medicine in Communist China, a note should be added on the accomplishments of Chinese scientists in Formosa. There are today more than 4,000 qualified medical doctors, 700 dentists, and 700 pharmacists registered in that tiny island with a population of a little over 10,000,000 and a total area of about 14,000 square miles. Many of them migrated from mainland China when the Nationalist régime fell.

In the field of public health, the Nationalists have set up a very fine county health centre system on the lines of the Nationalist one on the mainland. At the present time, there are three medical schools on the island. They are not only producing a good number of medical personnel but are also engaged in various kinds of important research, for instance on diseases of obscure aetiology and diseases among the aborigines. Nationalist scientists, in co-operation with American universities and medical institutions, have increased their research activities during the past few years.[37]

Conclusion

In summing up the progress of medicine and public health in China today, one must mention first the prevention and control of many infectious and parasitic diseases which had ravaged that country. The

[34] Chinese Academy of Medical Sciences, "Youth Anti-Cancer Shock Brigade," *Chinese Journal of Pathology*, 4:258, 1958.

[35] Yeh, T. F., *Chinese Medical Journal*, 79:338–540, December 1959.

[36] See Shih, M. H., *et al.*, *Chinese Journal of Tuberculosis*, 7:87, 1959, and Chu, K. C., *et al.*, *ibid.*, 7:92, 1959.

[37] Wei, H., "Medical Education and Research in the Republic of China," Report to the Sino-American Conference on Intellectual Co-operation, at the University of Washington in Seattle, Washington, July 9–15, 1960.

improvement of medical education in terms of quantity, if not quality, must also be noted. However, progress in other branches of medicine is not as rosy as Communist propaganda indicates.

The integration of traditional Chinese medicine with western medicine has obviously been over-stressed, but at present no one is in a position to conclude that nothing of value or importance to medical science will result.

There is a great socio-economic revolution going on among one-fourth of the human population in China. No matter what the political outcome in that country, that revolution's impact on the philosophy and practice of medicine and public health should not pass unnoticed by the rest of the world. Although the enforcement of the " commune system " has met with much opposition inside China and received severe criticism abroad, its success or failure will naturally depend upon the benefits reaped by the people, including those in the vital field of medical care.

Another interesting and important fact is that most senior doctors and medical scientists in Communist China today are either American-trained or have visited the United States. For the most part, they are competent workers and thinkers and form the backbone of the medical service.

Comment

The Chinese in the United States of America

MAY I make some corrections of Mr. William Skinner's review of my book? [*The China Quarterly*, No. 5.]

1. I am of Sze Yap, not Sam Yap, origin. How could he have missed this vital point in my "thinly disguised family and life histories" and "personal vendetta"?

2. I am a member of a Chinese clan and family. My village is Kew Lim, located near Toi Shan Shee, Toi Shan District, Kwangtung, China. This is about ten li from the market place of that area.

To help the reviewer find our home when he gets into interior China, it is located on Sai Mun Gai, Toi Shan Shee—not too far to walk from the Toi Shan Railroad Station.

My clan combined with three other small ones to form the Kung Sor, known as Chew Lun. It is extremely doubtful if the sources on Chinese clan and family, used by the Sinologists, sociologists, or others, in the United States would have these facts. What is true in a large, populous country like China in one locality is not true in another a short distance away.

3. Chicago's and New York's Chinatowns, among others, have unmistakable evidence of "the blight attacking their cores." I have been startled at the change in the New York one where urban renewal programmes are gaining headway.

The one in Chicago is being drastically reduced by the erection of the Southwest Expressway, connecting the western suburbs with Lake Shore Drive. The demolition has reached 26th Street, Wentworth Avenue, and soon 25th Street will be gone; demolition along Cermak and 22nd Street is likewise on the drawing boards of the urban renewal and planning boards. The present Chinatown is the second site—the first being on Clark Street where buildings yet stand that are inhabited by Chinese. It is doubtful if Chicago's Chinatown will be relocated at a third site, a move which the Chinese in Los Angeles had to undertake. The "Chinatown on Broadway" in Los Angeles is the third site, built primarily for the tourist, while the Chinese use the second site that is quite a distance away. The original site, on Ferguson Street and vicinity, shows no trace of a Chinatown's once being there.

It is doubtful if the urban renewal agencies in the cities under discussion will refuse to verify the above acts requiring the exercise and

execution of eminent domain in sites affecting many, many square miles of land and the dislocation of families and businesses.

4. On May 1, 1961—not too far away—a case involving a Chinese leader and his spouse was being tried in New York. This is one of several involving the use of " benevolent " associations *et al.* in oppressing other Chinese since 1956. Assuming that the reviewer has no time, or inclination, to search for the others, extending from New York to San Francisco, he should have no difficulty following this court trial in his own state. The data on this case goes back to the summer of 1959, was given wide circulation through newspapers across the country, including the *New York Times.*

It would be too much to suggest that the cases involving leaders of similar organisations in Canada be studied. They did not pertain to the group under study, and they occurred after the book was written. They show, however, similarity in organisation, function, purpose and composition in membership. What they reveal more glaringly is the effectiveness of law enforcement, through an impartial system of justice, where the officials prosecuting went to the areas of China from whence the Chinese migrated to conduct their investigations. These investigators know and speak Chinese, and a portion of their service was spent in China.

The case in New York, in contrast, elicited little sympathy for the Chinese victims. When the Caucasoid official, aiding the unfortunates, was threatened with " exile " to Alaska, thereby jeopardising his son's health, the newspapers raised a loud outcry and the case got under way.

Whenever the three races live in one locality—Caucasoid, Negroid, and Mongoloid—three systems of justice operate. The Caucasoids arrest Negroids more frequently to show, statistically, they are " less law-abiding." The opposite is true of the Chinese. The officials, regardless of levels of jurisdiction—hand the plaintiff back to the leaders and their organisations, the instigators of injustice and oppression in the very beginning. This preserves the stereotype, " the Chinese are law-abiding," and statistics on Chinese cases are minimal. This has resulted in the Chinese here avoiding contacts with courts and officials, regardless of how much they need help. Justice is not " two-faced "; it is " three-faced."

5. The editor who helpfully corrected my poor manuscript, full of " trivia," and who showed restraint in holding back his " shears," was born and raised in Asia. His children were born and reared there. He is conversant with Japanese, Chinese, Burmese and European languages other than English. The publisher, likewise, spent most of his life in Asia and his children were born and reared there. He, too, is gifted with several languages. By comparison, I am extremely uneducated. It is unlikely that I could have " put something over " these fine gentlemen. I had no intention of doing so.

To my best knowledge, the reviewer's knowledge of Asia was gained from about a year's stay in Thailand, on a research grant, to study Chinese social organisation. He subsequently returned on a similar mission for about a two-year stay in Indonesia to gather data for the completion of his advance degrees. I look forward to reading his scholarly treatment of the Chinese social organisation in these areas.

I am not aware of any study he has made of the Chinese in the United States of America.

6. My "personal vendetta" is against injustice, oppression, communism, organised crime, curtailment of individual liberty and happiness, and the preservation of the *status quo* for a privileged few. I am equally opposed to portraying life as it ought to be, instead of as it actually is—lived by human beings. The practices which affect people's lives should not be excused just because the actors are Chinese.

I am against Sze Yap mothers in the same way as I am against any mothers whose rash acts result in the victimisation of their children—these are my peers and friends who are left to live tragically scarred lives. I am against mothers who force their children to marry mates they select, or dissolve unions because the daughter-in-law proved "difficult." One such forced engagement resulted in the son committing suicide, while another girl went through an extensive emotional and mental collapse. Others (maybe less brave?) are living unhappily, and my sympathy goes to them whenever we meet.

These people react more drastically to broken homes, suicides, deportations, imprisonment and oppression because they have fewer opportunities to rise. At best, they have several strikes against them, struck from within the Chinese group and from without, by the larger society. The fact that the sufferers are Chinese does not mean these are not genuine emotions. There are fewer services for coping with the problems of a small minority, whom the various agencies do not take the trouble to understand. For some unknown reason, Caucasoids believe that genuine emotional reactions are their monopoly.

If by being a human being, before being a sociologist, makes me "unscholarly," rejected by the Sinologists, sociologists, Chinese leaders and their organisations and others, I accept this as a price one pays for non-conformity.

Finally, whose pen is being used by the reviewer in his lengthy "exposé" of my unpardonable sins?

ROSE HUM LEE.

Our reviewer replies:

I take it from Dr. Lee's letter that her father originated in one of the Sze Yap districts. This fact, not disclosed to the reader of her book (whereas the Sam Yap origin of her mother is tooted on the dust jacket as

well as in the text), helps explain the discriminating nature of her prejudice: she is careful to slander not Sze Yap Chinese in general but "foreign-born wives from the Sze Yap districts," not Sze Yap children (a category which might be construed to include offspring of Sam Yap mothers by Sze Yap fathers) but "the children . . . of Sze Yap mothers," etc.

Dr. Lee is correct in her surmise that I have never made a study of the Chinese in the United States. Her best knowledge of my research experience in Asia, however, is incomplete. I spent the better part of a decade in Asia: a year in west China (1949–50), over three years in Thailand (1950, 1951–53, 1954–55), and two years in Indonesia (1956–58). I am forced to admit, however, that my knowledge of Burmese is minimal and that only half of my children were born in Asia.

It was not my intention to suggest that Dr. Lee was other than a human being or that she fails to align herself with the angels. As for the pen in question—a well-worn red one made in Peking—it belongs to my wife; I have been using it rather more than she has ever since the nib lost its fine point.

G. WILLIAM SKINNER.

Legal Aspects of the Sino-Indian Border Dispute

IN the last issue of this journal, Mr. Hugh Richardson has commented at some length on my article under the above title.[1]

Let me say at the start that I was not concerned in making a case for either India or China. For this reason, while I made full use of the official documents put out by both sides, I commented on the issues involved from every point of view that was of interest to the international lawyer. I am therefore not very concerned whether the suggestions put forward on page 45 in my article concerning the functions of the Tibetan representative at the Simla Conference have been advanced by the Chinese or not. As an international lawyer I am concerned with the legal interpretation of the situation. I had already indicated on page 43 the manner in which British dominions were associated with treaty-making by Great Britain on their behalf, and it was only logical that I should maintain my view of this matter for discussions in 1914, as well as for those six years earlier. It would appear that Mr. Richardson has taken the one sentence out of its context, completely ignoring the two pages that precede it.

It may be perfectly true that "Tibetan acceptance of the formal overlordship of the Manchu Emperors of China . . . had been based on no written agreement [, that] it was due not to conquest but to a sort of diplomatic arrangement [and that] the Tibetans . . . renounced the overlordship of the Chinese Emperor and declared their independence." This is not the only time that a "subject people" has unilaterally denounced its overlord and declared independence. Only recently, colonial African

[1] Published in *The China Quarterly*, No. 3, 1960.

peoples have purported to denounce agreements with the British Crown, some of which had already ceased to function in the sense in which they were intended, as the rights under them had been assigned to the majority peoples in a new dominion, as in the case of Nigeria.

What is important in such circumstances is not the attitude of the people who deny that they are under suzerainty. From the point of view of international law, the only thing that is relevant is the attitude of third States and whether they have extended recognition or not. It is special pleading to maintain that the United Kingdom recognised Tibetan independence. It may be true that the recognition of Chinese suzerainty was conditional upon the Chinese acceptance of Tibetan internal autonomy. It should be remembered, however, that conditional recognition "is an exceptional occurrence. The very rarity of such stipulations testifies to the fact that the practice of States does not treat recognition as a contract or bargain affording a legitimate occasion for extracting promises.... The impropriety of such attempts has occasionally brought forth protests by the government affected and has been criticised by statesmen of authority.... There has been general agreement that ... its effect was merely to confer a right of intervention as distinguished from the right to withdraw recognition.... The practice of States shows no instances of such stipulations being treated as giving the right, in case of non-fulfilment, to withdraw recognition. There is accordingly no warrant for regarding them as conditions in the accepted legal sense of the word."[2] Any right of intervention that the United Kingdom may have possessed would now be foreclosed, in the first instance, by her acceptance of the United Nations Charter, and, secondly, by the transfer of her rights to India, who, as Mr. Richardson himself points out, has admitted that Tibet is an integral part of China. From the legal point of view it is completely irrelevant that this Indian admission was made after "China's *de facto* invasion and subjection of Tibet."

Mr. Richardson's remarks with regard to the Indian stand on the McMahon Line in no way affect the legal view of Tibet's status either in 1914 or today. Whatever be the origin of the Sino-Indian frontier, practice and tacit recognition have confirmed its validity.

For these reasons, I see no ground to alter my view of Tibet's status in international law, nor do I consider that to do so would in any way strengthen the validity of India's title to the territory on her side of the McMahon Line. Long practice, extending even before 1914, confirms this boundary, while the attitudes adopted by third States confirms that Tibet is not, and has not been for many years, anything akin to an independent sovereign State.

L. C. GREEN.

[2] Lauterpacht, *Recognition in International Law*, 1947, pp. 360–364.

Book Reviews

A Review Article: The Pre-Revolutionary Intellectuals of China and Russia

By MARY C. WRIGHT

The May Fourth Movement; Intellectual Revolution in Modern China. CHOW TSE-TSUNG. [Cambridge: Harvard University. 1960. 486 pp. $10.00] in the light of the issues raised in the symposium on "The Russian Intelligentsia," in *Daedulus* (Journal of the American Academy of Arts and Sciences. Summer 1960. 670 pp. $1.25).

INTELLECTUALS [1]—the appointed or self-appointed guardians of the values of a people—have appeared in all civilisations, but they were peculiarly prominent in eighteenth century France, nineteenth century Russia, and in the China of the first half of the twentieth century. As the ideas stemming from the European enlightenment, coupled with the products of the industrial revolution, have spread into societies with other traditions, the intellectuals of these societies have been driven to interpret the new and to re-evaluate the old. Even those who have most stoutly resisted the new have been profoundly affected by it, as those who have most furiously attacked the old have shown their dependence on it in their conception of, and selection from, the new.

The drama of the Russian Revolution of 1917 and the Chinese Revolution of 1949, together with certain obvious similarities between them, have attracted particular attention to the pre-revolutionary intellectuals in the two countries. They have been praised and they have been condemned, but until recently they have not been really studied. The absorbing essays in *Daedulus* rest heavily on monographs of the past few years and on the authors' own research. The study of Chinese

[1] I use the term intellectuals in the sense in which the contributors to *Daedulus* use "intelligentsia": that portion of the educated classes whose attention was centred on the great issues of the age. The contrived Chinese word for intelligentsia, *chih-shih fen-tzu*, came into general use after the October Revolution, and to me suggests the educated functionary rather than the critic at odds with an imperfect society.

intellectuals is even newer. Dr. Chow's monumental work is, in fact, the pioneering monograph.

The May Fourth Movement of roughly the years 1917 to 1921 takes its name from the students' mass demonstrations of 1919 against the ineffectual Peking government's inability to protect China's interests at the Versailles Peace Conference. These demonstrations were the symbol of a vast upheaval in every sphere of Chinese life, an upheaval of such dimensions that the Nationalists have deplored everything about it except its nationalism, while the Communists have hailed it alternately as China's bourgeois revolution and as the first step of the New Democratic revolution that culminated in 1949. The book is required reading for every student of modern China. There is rich material not only on the growth of Chinese nationalism but on international relations; on the effects of Western-style education; on the emerging classes of industrialists, modern merchants, and urban workers; on changes in the Chinese family; on the origins of the Chinese Communist Party; on the new art and the new vernacular literature; and on the new thought of a hundred types.

The author has achieved rare success in not allowing his prodigious research to obscure the main lines of his thoughtful inquiry into the basic character of the movement, and from his account certain similarities in outlook and role between Russian intellectuals of the nineteenth century and Chinese intellectuals of the twentieth are immediately obvious. Both were profoundly disturbed by the general state of society. Both shunned specialisation; their main concern was nothing less than the nature of the good society. In both countries, they were acutely conscious of their own separateness—more so in Russia than in China, however—and persistently tried to define their own social role. At the same time, they were activists in both countries. Both were romantically devoted to the peasant cause. In both countries the intellectual defenders of tradition spoke with a thin voice. In both, the main intellectual current was revolutionary, and the programmes tended to be Utopian and totalist. After the Communist revolutions, intellectuals as the independent guardians of the values of a society became virtually extinct in Russia and have been largely unable to function in China.

These similarities in outlook and role between Russian intellectuals of the nineteenth century and Chinese intellectuals of the twentieth century can be accounted for in part by the fact that they faced the same general problem: how to reconcile dreams ultimately inspired by the European enlightenment with the stubborn reality that surrounded them. But most of the non-Western world has faced this problem. Are there more specific comparisons between China and Russia? Can we say that here we have two autocratic traditions, both non-Western? Two

societies made up of illiterate peasants, each with a thin layer of the privileged and educated almost wholly separated from the mass? Two economically backward countries that wanted development? Two simple societies consisting only of the rulers and the ruled and therefore lacking the institutional variety that was the key to Western Europe's freedom and progress? Two societies, therefore, in which a floating class of outraged intellectuals succeeded in undermining the old order, but was so removed from the complexities of the real world that it was destroyed by the revolutions it had begun?

Such neat parallels are tempting, but the material presented in *The May Fourth Movement* and in *Daedulus* suggests that behind the general similarity between Russian and Chinese intellectuals, there are differences that may be even more significant, and that this comes from the fact that pre-revolutionary Russia was as different from pre-revolutionary China as both were from the modern West.

First, the Chinese intellectuals, in contrast to the Russian intellectuals, were politically nationalistic. We are presented with a picture of Russian intellectuals protesting the powerful establishment of the Russian state, deploring the success of its arms abroad; of Chinese intellectuals, stung by the powerlessness of their government, demanding the re-creation of strong central government with a strong army. The cause for the difference is obvious: however weak the foundations may have been, pre-revolutionary Russia was still a great power, formidable and feared; pre-revolutionary China had been defeated in every war and at every conference table. But to point to the cause is not to discount the effect, which was an important difference in outlook.

Second, the Russian intellectual's basic hostility to the state as such seems lacking in the Chinese intellectual. This, I think, goes deeper than twentieth century Chinese nationalism and stems from the traditional search for office by Chinese intellectuals, in contrast to the abhorrence of state service by Russian intellectuals after 1762. In imperial China, the bureaucrats and the intellectuals had been to a large degree the same people, and the new intellectuals of the twentieth century came in considerable measure from this class. The background of Russia's pre-revolutionary intellectuals seems to have been very different.

Third, the Chinese intellectuals do not seem to have been alienated from society in the sense that Russian intellectuals were. Dr. Chow establishes the point that again and again the intellectuals were joined by merchants, industrialists, and others. The *Daedulus* essays indicate that except for a brief moment during the 1905 revolution and a patriotic rallying in 1914, Russian intellectuals were unable to maintain effective connections with other segments of society. Here again the causes are obvious enough: a common Chinese nationalism, the greater fluidity of

Chinese society, and the fact that Chinese merchants and industrialists, not part of a growing economy like that of late Imperial Russia, were in their way, critics of the existing order.

Fourth, although Dr. Chow presents abundant evidence on the condemnation of "Confucian barbarism" by revolutionary Chinese intellectuals, one wonders whether they were as revolted by their national life as were the Russians who recoiled from "cursed Russian reality," from "the kingdom of darkness." Does not a comparison of the writings of the two groups suggest an underlying pride in China's past on the part of China's revolutionary intellectuals?

Fifth, are the Chinese intellectuals really debating, as they claim, the basic issues of philosophy and politics debated by the Russians, or are they using half-understood new terms to debate quite different and much less abstract issues growing out of Chinese reality? Dr. Chow's analysis disposes once and for all of the notion held by some Westerners that modern Chinese intellectual and cultural life has been shallow and vapid. But one wonders whether a nineteenth century Russian intellectual would have believed that the Chinese anarchists were discussing anarchism, or the Marxists Marxism.

In my view the crucial issue here for assessing the import of the May Fourth Movement for subsequent Chinese history is whether or not the new ideas of independent criticism and the freedom of the individual, which we usually have thought rooted in the Judaeo-Christian and Hellenic traditions, were really understood and accepted in Chinese intellectual circles. Were there any who really believed that there must be limits on the power of the state for good or evil, a proposition on which the western conception of individual worth depends? The imperial Chinese state, if not totalitarian, was certainly all-embracing. No sphere of life or thought was beyond its concern. During the short period between its fall and the accession to power of the Communists, the collective welfare was always at stake, because of wars and economic crises. One would not have expected the ideas of freedom and independence to take root, for Chinese intellectuals faced an incalculably greater problem, spiritually and materially, than Russian intellectuals.

And yet paradoxically it has been in China not Russia that pre-revolutionary intellectuals and younger men of the same stamp have survived and spoken out. There has not been in Russia anything like the fundamental criticism from within the system that poured out during the brief "hundred flowers" period of 1957. In part, these bold statements are certainly a result of the May Fourth Movement and support the final sentence in Dr. Chow's book: "The currents set in motion at that time continue to dominate the scene; the profound problems raised then remain to be reconsidered and solved."

But perhaps this survival of critical independence in China is a result of more than China's brief exposure to Western liberalism and radicalism. In our anxiety not to romanticise Chinese tradition, we may have given insufficient weight to its variety. There were strains other than Confucianism, and Confucianism was not wholly authoritarian. There were many kinds of Utopia. And even at the heart of the authoritarian strain there was an ingrained notion that the state was responsible for the welfare of the people, and that to achieve this end the monarch must heed independent criticism. It seems possible that just as twentieth-century Chinese intellectuals, in trying to build a new world view, selected from among the new ideas they encountered those their tradition could tolerate, so also they selected from tradition the elements that were not at war with their conception of the future. It is by no means a foregone conclusion that China has passed from one Asian totalitarianism to another, leaving no value to which the West can ever hope to appeal as a basis of negotiation. This is of course pure speculation, but the survival of the spirit of the revolutionary intellectuals is a fact.

We are told that in Russia, by contrast, where the revolutionary intellectual tradition had been longer, stronger, and at home, it has disappeared completely except for a distorted survival in the Communist Party itself. Martin Malia writes: "In spite of its demise as a group, the more radical intelligentsia is with us still as a force. Its ideal vision, whatever one may think of it, has become in a debased but potent form, the very fabric of Russian reality."

If there is evidence for this statement in the case of the Russian Communist Party, there is even more in the case of the Chinese Communist Party, many of whose top leaders, including of course Mao himself, were radical intellectuals of the pre-revolutionary period, and whose "ideal vision" seems more radical and more Utopian than the Russian one. Consider the defiant Chinese answer to the question of the relative value of professional specialisation and Communist fervour: "the redder, the more expert." Is this an echo of the great humanist tradition of the western revolutionary intellectuals for whom passionate ideological vision far overshadowed narrow, practical knowledge? Is it also an echo of Chinese tradition which has persistently held that the highly indoctrinated universal man can perform any task better than a specialist?

The answers to these questions, which are at this point the flimsiest speculations, lie in the close study of Communist China, in more perceptive study of varieties of the Chinese tradition, and, perhaps most important of all, in further analysis of the May Fourth Movement.

The Emancipation of French Indo-China. By DONALD LANCASTER. *With appendices, select bibliography, index, and folding map.* [For the Royal Institute of International Affairs, Oxford University Press. 1961. 445 pp. 45s.]

IF there is one single feature common to all the books which have been written about the events in Indo-China during the past twenty years, it is passion. Frenchmen have sought to justify the actions of their country in the area; Americans have preached the two doctrines of anti-colonialism and anti-Communism—no easy task when the Communists have seized control of the nationalist movement; Communists, many Frenchmen among them, have written in support of the Communist Viet Minh; generals and senior administrators have defended their own conduct. All of these writers were emotionally involved in the events, and the nature of their involvement dominated the books they produced. There was something in the atmosphere of wartime Indo-China which raised the blood pressure of those who were implicated, however remotely. Mr. Lancaster's book is the first work on this subject which presents an objective, non-partisan account of the independence struggle, and for this reason it is most welcome.

Following a brief and highly compressed sketch of the historical background, the book quickly reaches its principal subject, the struggle for Indo-Chinese independence. It is the war in Vietnam to which the author has devoted most of his attention and space, the events in Laos and Cambodia receiving somewhat perfunctory treatment, but this is reasonable and logical since nearly all the major engagements, both military and political, were fought in the Vietnamese arena. The concluding chapters are devoted to the Geneva Conference on Indo-China and to the first years of independence in the now separate states of north and south Vietnam. There are two short but very enlightening appendices, the first devoted to the moral climate in French political and commercial circles and the second to the military organisation in the Viet Minh zone during the hostilities. The book is completed by a select bibliography, an excellent map marking and naming the provinces of Vietnam, and an index.

This is also the first book to portray the whole struggle and its aftermath on one canvas and, even if some of the detail has necessarily been omitted, it enables one to view all the events in their true perspective. The formidable task of reducing this lengthy and complicated series of events to a manageable size has been ably executed by the author, and his book will undoubtedly become a standard work on the subject.

Through all the pages runs a deep feeling of compassion for the victims of the tragic happenings, for tragic they certainly were. The two

groups which command the author's greatest admiration are the Vietnamese people, steadfastly struggling to overcome one disaster after another, whose dignity and sense of national pride were shamelessly exploited by a small group of Communists for their own ends, and the Expeditionary Corps, a heterogeneous body of soldiers betrayed again and again by the politicians and wealthy business men, who nevertheless continued to fight heroically under the most adverse conditions until the final battle at Dien Bien Phu. Although the style of presentation is academic, with footnote references to published sources on every page, this is nonetheless a book which could have been written only by someone who lived through the events described, who knew the Vietnamese and the French well, and who entertained a genuine sympathy for the difficulties which faced both sides.

Readers who knew of the struggle in Indo-China only through press reports will be surprised by some of Mr. Lancaster's judgments, but they will find them more soundly based than those of the transient war correspondents, and validated by the events. The ex-Emperor Bao Dai, for example, is seen not as the rich and degenerate playboy who gambled on the French Riviera while his people suffered, but as a sensitive, highly intelligent, and shy patriot, intensely conscious of the tragic plight of Vietnam. A monarch whose most profound longing was to improve the life of his subjects, Bao Dai was driven into the casinos by frustration, by his own position, which was untenable from the beginning, and by his lack of strong character. Marshal de Lattre de Tassigny, who achieved superhuman proportions in the pages of the world's press, is credited with raising the morale of the Expeditionary Corps and with shouldering the responsibilities his predecessors had shirked. But the author states unequivocally that de Lattre introduced no radical changes in the conduct of the war, and no basic changes in strategy. Indeed, he is said to have made reckless promises for the future in order to obtain an immediate advantage, thus rendering the task of his successor many times more difficult. Mr. Lancaster thinks it unlikely that the Expeditionary Corps was deprived of victory by his death.

For students of contemporary politics, perhaps the most interesting item is the author's suggestion that Mendès-France concluded a secret agreement with the Soviet Foreign Minister, Molotov, whereby Russia undertook to secure for France an honourable peace treaty at Geneva in exchange for France's rejection of the European Defence Community. In retrospect, Molotov's vitriolic attack upon Bidault in the conference chamber, which brought about the overthrow of the Laniel government and the accession of Mendès-France to office, together with France's final rejection of E.D.C. on a mere question of procedure in a debate arranged by Mendès-France, make this a most plausible theory.

The unhappy history of the two newly independent Vietnamese states provides a fitting last act for the tragedy which this book describes. The reader is left with the feeling that the Vietnamese people deserved better than this after the years of bloodshed and sacrifice, and lead him to doubt the truth of the dictum " people get the kind of government they deserve."

The Emancipation of French Indo-China presents an account of this immensely complex subject which is informative, objective, and sympathetically written. It is a book for which all students of post-war South East Asia must own gratitude to Mr. Lancaster.

P. J. HONEY.

Quarterly Chronicle and Documentation

1. Internal Political and Economic Developments

The End of the Great Leap Forward

The wording of the New Year editorial in *Red Flag* gave the first indication that the "Great Leap Forward" and the philosophy and methods which it symbolised had been abandoned.[1] Throughout, the editorial referred to 1958–60 as the three years of great leap development; and it concluded by calling, not for a new leap forward, but only for a brave advance under the guidance of the three banners of the general line, the leap forward and the communes.

The importance of this semantic shift could be seen when the Communist Party's central committee held its ninth plenum from January 14 to 18. The emphasis in the communiqué issued (see below) was on consolidation and realism rather than leaping progress. Capital construction was to be reduced; quality and variety rather than quantity were emphasised. The critical nature of the shortage of raw materials for light industry was admitted, and stimulation of rural markets—by permitting private trading, as it later turned out—was advocated as one cure.

One of the most interesting passages in the communiqué was the implicit admission that the Party's relations with the people were not of the best. To go by the percentages given, some 50 million Chinese could not be regarded as firm supporters of the Party's policies; and some one million Party members were "bad" or vacillating elements. The central committee prescribed a new rectification campaign for Party functionaries to remedy the latter situation. One report of how this campaign is being conducted indicates the privileged class mentality of the Party officials which has evidently alienated the people.[2]

Po I-po elaborated the new economic policy at greater length in *Red Flag*, Nos. 3 and 4 (see below) and stressed the renewed emphasis on central planning by reviewing the slogan of taking the country as a

[1] *Red Flag*, No. 1, 1961.
[2] "Thoroughly Redress Past Mistakes," *Nan-fang Jih-pao*, February 11, 1961, in *Survey of the China Mainland Press* (SCMP) (Hong Kong: U.S. Consulate-General), No. 2492.

" single co-ordinated chess game." Propagandists emphasised the need for careful investigations and realistic appraisals of actual situations; officials were advised to seek the counsel of older peasants with the greatest practical experience. The campaign to improve the repair and maintenance of tools, particularly agricultural ones, which started at the end of 1960 gained momentum; the numerous reports indicated that these vital tasks had been greatly neglected during the hectic days of the leap forward.

The new mood of realism came none too soon for the weather reports indicated that China might be faced with a third disastrous agricultural year. Severe drought was said to have occurred in a number of northern provinces.

The Central Committee's Ninth Plenum

The Ninth Plenary Session of the Eighth Central Committee held that, in view of the serious natural calamities that affected agricultural production for two successive years, the whole nation in 1961 must concentrate on strengthening the agricultural front, thoroughly carry out the policy of taking agriculture as the foundation of the national economy and of the whole Party and the entire people going in for agriculture and grain production in a big way, step up support for agriculture by all trades and professions and exert the utmost effort to win a better harvest in agricultural production. In the rural areas, efforts must be made to consolidate further the people's communes, thoroughly carry out the various policies concerning the people's commune and the rural economy, adopt effective measures to take good care of the livelihood of the people's commune members, help them tide over the difficulties entailed by natural calamities and make good preparations for increasing agricultural output this year. The departments of light industry should strive to overcome the difficulties of raw material shortages brought about by natural calamities, open up new sources of raw materials, increase production and ensure the supply of the people's daily necessities as far as possible. In heavy industry, inasmuch as tremendous development has been achieved over the past three years and as the output of major products has greatly exceeded the levels originally scheduled for 1961 and 1962, the last two years of the Second Five-Year Plan, the scope of capital construction in 1961 should be appropriately reduced, the rate of development should be readjusted and a policy of consolidating, filling out and raising standards should be adopted on the basis of the victories already won. This means that efforts should be made to improve the quality of products, increase their variety, strengthen the weak links in production and continue to develop the mass movement of technical innovations, economize raw materials, lower costs of production and raise labour productivity.

The temporary difficulties in supplying the market caused by the poor harvest and the shortage of raw materials for light industry are important problems urgently calling for solution. The Plenary Session called on all departments concerned to take prompt steps to help the development of light industry, urban and rural handicraft industry, domestic side-occupations and suburban agriculture and to increase the production of all sorts of consumer goods and non-staple foodstuffs, while improving commercial work and

stimulating primary markets in the villages so as gradually to improve conditions of supply.

The Ninth Plenary Session of the Eighth Central Committee proposed to the State Council that a draft national economic plan for 1961 be drawn up in accordance with the policy adopted by the Plenary Session and be submitted to the National People's Congress for consideration.

The Ninth Plenary Session of the Eighth Central Committee pointed out that at present it is of the utmost importance to strengthen the ties of the Party and Government organizations at various levels and all their functionaries with the masses of the people. The overwhelming majority, or over 90 per cent., of the urban and rural population in the country support the line and policies of the Party and the People's Government. They know that the Party and the Government will firmly lead them through the present temporary difficulties to win new victories, they are actively and enthusiastically helping the Party and the Government in this work. There is, however, an extremely small number of landlord and bourgeois elements, accounting for only a few per cent. of the population, who have not yet been sufficiently remoulded and are always attempting to stage a come-back as stated in the 1957 Moscow Declaration; they have taken advantage of the difficulties caused by natural calamities and of some shortcomings in the work at the primary levels to carry out sabotaging activities. Among the Party and Government functionaries, more than 90 per cent. work faithfully and conscientiously for the people; but there are a few per cent. who are bad elements, who have sneaked into the revolutionary ranks and various economic organizations, *i.e.*, landlord and bourgeois elements who have not yet been sufficiently remoulded, and also those elements who have degenerated owing to influence and corrosion by the reactionary classes. These bad elements break laws and violate discipline in the villages and cities to the detriment of the interests of the people. Besides, there are a few functionaries who, although good-willed and well-intentioned, do not have a sufficiently high level of ideological consciousness. They lack understanding of the fundamental policies of the Party and the Government, they lack sufficient understanding of the distinction between socialism and communism, of the distinction between socialist ownership by the collective and socialist ownership by the people as a whole, of the three-level ownership in the people's communes with the production brigade as the basic level, and of the socialist society's principles of exchange of equal values, "to each according to his work" and more income for those who work more—all of which the Party has repeatedly publicized. In view of all this, the Party organizations in many places have, in accordance with the instructions of the Central Committee, carried out a rectification movement among the functionaries in the rural and urban areas, which has already yielded good results. The Plenary Session decided that this movement be carried out throughout the country stage by stage and area by area to help the cadres enhance their ideological and political level, improve their method and style of work and purify the organizations by cleaning out the extremely few bad elements who have been verified by careful check-up as having sneaked into the Party and Government organizations and at the same time prevent and stop the sabotaging activities of the bad elements. The Plenary Session held that all this work must be done by fully arousing the masses, by the free and complete airing of views and with great vigour.

The Ninth Plenary Session of the Eighth Central Committee emphatically pointed out that the tasks in 1961 are extremely arduous. But the difficulties can be overcome and the tasks fulfilled by relying on the great unity of the whole Party and the people of the whole country, by relying on the great power of the three red banners—the general line, the big leap forward and the people's communes—by relying on the great achievements and the rich experience of the past three years, and by relying on the rectification movement. . . .

The Ninth Plenary Session of the Eighth Central Committee, taking into consideration the great development of socialist construction in the provinces, municipalities and autonomous regions in our country in the past three years, decided to set up six Bureaus of the Central Committee, *i.e.*, the Northeast Bureau of the Central Committee, the North China Bureau of the Central Committee, the East China Bureau of the Central Committee, the Central-South Bureau of the Central Committee, the Southwest Bureau of the Central Committee and the Northwest Bureau of the Central Committee—to act for the Central Committee in strengthening leadership over the Party committees in the various provinces, municipalities and autonomous regions.

[Communiqué issued January 20, *Peking Review*, No. 4, 1961.]

Po I-po on the Economic Tasks

The laws of motion of all things indicate that they move upward to higher levels in a spiral curve and that they develop in wave-like fashion. Motion in the field of economy is no exception. So far as the process of the big leap forward in China's industry is concerned, it is probably like this: Given a particular foundation and under certain conditions of production, there are several years in which the rate of development is extremely high, others in which the rate of development is comparatively low, and still others in which the rate of development once more becomes very high. In the past three years, our industry developed on a relatively weak basis; quantitatively there was an enormous increase while qualitatively there was also a certain rise. From now on, while we continue to increase in quantity, we should greatly raise quality. It can be expected that after two or three years our industry will, on a new and developed basis, certainly become still further consolidated, richer in content and higher in standard, and that there will certainly emerge a still better leap forward. Therefore, the policy of consolidating, filling out and raising standards put forward by the Party's Central Committee is a positive policy beneficial both to consolidating the great achievements scored in the big leap forward in three consecutive years and to the continued leap forward in our national economy in the days to come.

To carry through the policy of consolidating, filling out and raising standards on a developed basis requires, first and foremost, that we should concentrate our forces to strengthen the agricultural front, reinforce the support given to agriculture by all trades and professions, do our utmost to bring in a better harvest in agriculture this year, and increase the speed of agricultural development as far as possible. At the same time, efforts should be made to open up new sources of raw materials, speed up the expansion of light industry and ensure the supply of the people's daily necessities as far as possible. In heavy industry, close attention should be paid to the extracting industries and a bigger increase should be brought about

in the output of coal, petroleum, iron ores, non-ferrous metals, raw materials for the chemical industry, non-metallic materials, timber, etc., enabling them to meet better the needs of development of the processing industries. While developing industrial production, communications and transport should also be strengthened so as to effectively link up bases producing raw materials with those for processing and production units with consumption units, thereby ensuring the smooth production and flow of goods. The scope of industrial capital construction should be appropriately reduced in order to concentrate forces to complete essential projects batch by batch. The main task in industrial capital construction in the next two or three years is, proceeding from the productive capacity of the existing equipment of the various industrial departments and the various links in the production process, to fill up the gaps and achieve a proper balance, manufacture complete sets of equipment and raise capabilities for multi-purpose production. . . .

It is an important task on the industrial front in the next two or three years to strive for a leap forward in the quality and variety of industrial products. Quantity in industrial production is an important indication of the level of industrial development, but it is not the only indication. As there is no such thing as quality unrelated to quantity, so there is no such thing as quantity in the abstract; as specific quantities of products possess specific qualities, the quality of products is embodied in specific quantities of products. There may be large or small quantities, and there may be high or low quality. When the quantity of products having a certain quality is developed to a certain level, more attention should then be given to their quality and variety, giving top consideration to improving their quality and increasing their variety. As far as bettering the quality of heavy industrial products is concerned, we should first and foremost improve the quality of coal, iron and steel. At the same time, efforts should be made to boost the output of high-grade steel, alloy steel and important steel products, and to greatly increase their proportion in the total output of steel and steel products. The quality of light industrial products directly affects the vital interests of the consumer; every effort should be made to produce light industrial products that are durable, of good quality and low price. The common and specific needs of the people in the cities and countryside should also be taken into account, and we should increase the designs and variety of our light industrial products. . . .

To fulfil state plan targets in output, quality and variety in an all-round manner, it is necessary, in addition to filling up the gaps and achieving a proper balance between the various industrial departments as mentioned above, to do satisfactory equipment maintenance and repair work and achieve a proper balance of productive capacities of the various processes within enterprises, especially heavy industrial enterprises.

Besides doing maintenance work well and achieving a proper balance in productive capacity, rational organization of labour is also necessary if we are to fulfil the state plan in an all-round manner. The number of workers and staff members in the departments of industry and communications has more than doubled over the past three years. The overwhelming majority of enterprises can certainly meet requirements for continued production growth with the manpower already at their disposal. We should depend on raising labour productivity for further development of production in the future. . . .

An important task facing industrial departments today is to further economize on raw and other materials and fuel and lower production costs

on the basis of improving the quality and increasing the variety of products and raising labour productivity. Huge potentials in this respect remain to be tapped in all industrial departments and enterprises. Large quantities of coal, pig iron, steel products and other materials can be saved and more industrial goods produced, if we help backward enterprises to adopt effective measures and exert earnest efforts to reach first the average advanced level and then the advanced level in economizing on raw and other materials and fuel.

To save raw and other materials and fuel and reduce costs of products, all enterprises should strengthen the control of quotas and introduce efficient business accounting. . . .

To effectively fulfil the above-mentioned tasks, the enterprises should strengthen their management in earnest. With the experience accumulated over the past ten years, especially that of the big leap forward in the past three consecutive years, we have formulated a complete set of methods for the management of enterprises suitable to China's specific conditions, *i.e.*, closely integrating centralized leadership with the organization of mass movements in a big way, the leadership of the Party committee with the firmly-grounded responsibility of the factory director, political with economic work, and the strengthening of political, ideological education with the thorough implementation of the principle of "to each according to his work," and persisting in the principles of "workers' participation in management, cadres' participation in productive labour, the reform of out-dated irrational rules and regulations, and the close co-operation between leading cadres, the rank and file and technicians," etc. The question now is to further systematize these principles and methods and apply them universally.

To ensure the smooth development, in accordance with set policies, of the national economy in 1961, all departments, localities and economic concerns must, when drawing up and implementing their plans, be true to the spirit of regarding the entire economy as a single co-ordinated "chess game." That is to say, they should consider their work within the framework of the unified state plan, shape their activities to meet the requirements of this plan, and strive energetically to fulfil and overfulfil the state plan. Available forces in all fields should be concentrated for the fulfilment of the most urgent tasks that confront us today and for the thorough implementation of the policy of taking agriculture as the foundation of the national economy and placing it above all else and the policy of consolidating, filling out and raising standards on the basis of expansion. Experience of the past few years enables us to realize more clearly that the state plan should take into full consideration the initiative of all concerned and that this initiative should first of all manifest itself in the fulfilment and overfulfilment of the state plan. If, when drawing up the economic plan, the state does not fully allow for the initiative of all concerned, it would be impossible for the national economy to develop in such a way as to achieve greater, faster, better and more economical results. If, on the other hand, a certain field or a certain unit divorces itself from the state plan and the requirements of the whole, and displays its "initiative" in a onesided manner, it would not only be detrimental to the whole, but would eventually bring harm to itself.

To make investigations and studies constantly is a matter of the greatest importance in striving for new victories in industrial production and construction. To formulate the correct line, policies and principles, it is essential that scientific and meticulous investigations and studies be made. Such

investigations and studies are also indispensable when implementing the Party's line, policies and principles. A clear understanding of the situation, firm resolve and correct methods of work are the basic conditions for success in any endeavour. . . .

In 1961, under the leadership of the Communist Party committees at all levels and by the extensive mobilization of the masses, a rectification movement should be carried out in all industrial departments and enterprises stage by stage and group by group. In the enterprises, the movement should start with investigations and studies, check-up on the work done and the summing up of experience. It should be carried out in close co-ordination with production. Improvements should be introduced while the movement is still in progress so as to propel production forward. We should strive through the movement to enable all cadres to raise their political level and their understanding of policies, to develop the style of work of seeking truth from facts, relying on the masses, working hard and of democracy and unity, so that the Party's policies may be executed thoroughly and in an all-round manner and the state plan fulfilled with greater, faster, better and more economical results.

The Ninth Plenary Session of the Party's Eighth Central Committee called on the whole Party and people throughout the country to persist in the revolutionary spirit of going all out and aiming high, to carry forward the fine tradition of seeking truth from facts and of working hard and perseveringly, and by every means to take timely and effective measures to strive for a bumper harvest this year and for the fulfilment of the new tasks in industry, transport, commerce, culture and education as well as in the other spheres of socialist construction. We are confident that our working class, together with the people of the whole country, will certainly respond to the Party's call with the highest enthusiasm and firm will, overcome all difficulties in production and construction and successfully carry out the glorious tasks assigned them by the Party and the state.

[*Red Flag*, Nos. 3 & 4, 1961. From the abridged translation in *Peking Review*, No. 8, 1961.]

Revival of the "Hundred Flowers" Campaign

Another example of the new realism evident with the abandonment of the leap forward, was the decision to encourage academics to go their several ways in research under the slogan first promulgated by Mao in 1956—"Let a hundred flowers bloom, let a hundred schools contend." The revival of the slogan in a *Red Flag* article [8] was justified much as it had been five years ago: to ascertain objective truth it was necessary to explore all avenues. The article indicated that it was at least intended to relax ideological leading strings:

> . . . Marxism-Leninism cannot replace research in every specific branch of science . . . we must not imagine that given Marxism-Leninism, the discovery of scientific truth becomes an easy matter free of zigzags and difficulties, guaranteed against mistakes, and having no need for free debate between different views. Neither must we imagine that

[8] Translated in *Peking Review*, No. 12, 1961.

judgments can be passed on rights and wrongs in scientific debates simply by reciting certain principles of Marxist-Leninist theory.

Another passage in the article indicated that the intention was to give intellectuals a pretty free hand *academically* even if they did not accept Marxist-Leninist theories about their field so long they were loyal *politically*.

Protestants Confer

Representatives of China's protestant churches met in Shanghai during the quarter and elected a 145-member National Committee of Protestant Churches in China for Self-Administration. The conference passed a resolution supporting Party policies and condemning "imperialist aggression."

2. Foreign Relations

China and Laos

In comment on the situation in Laos the Chinese press and radio during the first three months of 1961 maintained the view that the Cabinet of Souvanna Phouma, even after its flight to Cambodia, remained the legitimate Laotian government—it was regularly referred to as the Royal Laotian Government to emphasise its respectability—and that "the Phoumi-Boun Oum clique" were rebels, who were attacking the legitimate government with the support of the United States, Thailand and South Vietnam.

Following a statement in support of the Souvanna Phouma Government by Ch'en Yi on February 22, the *Jen-min Jih-pao* on February 25 declared that the United States had used the United Nations to attack the legal Government of the Congo and bring about the murder of its Prime Minister Lumumba; it was now "not only persisting in its outrages in the Congo, but also attempting to turn Laos into another Congo." This policy of American imperialism merited the "serious attention and vigilance" of the Chinese people. The Chinese people had consistently striven to "safeguard the Geneva agreements, the neutrality of Laos and peace in Indo-China"; they welcomed the stand of the Laotian government and people against American intervention and were convinced that, if they persisted in their struggle, they would "smash all schemes and tricks of American imperialism and realise independence, peace and neutrality of Laos with the support of all peace-loving peoples." The editorial quoted Ch'en Yi's backing of Prince Sihanouk's proposal for the summoning of an "enlarged" Geneva conference. Peking and the Souvanna Phouma government agreed to exchange economic and cultural missions.

The air-lift to Laos

The massive air-lift of arms and supplies to the Pathet Lao forces in Laos by Soviet transport aircraft gained international publicity from the beginning of the year and publicly committed the Soviet Union to involvement in the Laotian civil war. Reports indicated, however, that the flights were based primarily on airfields at Kunming and Nanning and that the air-lift was in fact a joint Sino-Soviet enterprise. Soviet aircraft could not indeed reach Laos except across China, and there did not appear to be any reason to believe that the Chinese would not have been technically capable of mounting such an operation on their own, apart from the risks which they would run in an anti-American intervention in Laos without Soviet backing. The Sino-Soviet combined action following so soon on the Moscow Declaration of the Eighty-one Communist Parties and the Sino-Soviet debate which preceded it, suggested a deal whereby China obtained Soviet co-operation in a matter of direct concern only to Peking and Russia an opportunity to demonstrate to all East Asian Communists that its revolutionary zeal (in spite of aspersions cast on it during the last year) remained unimpaired.

China and Albania

In spite of the apparent Sino-Soviet co-operation over Laos, Peking did not refrain from fostering that special attachment of the Albanian Communists which had given rise to the description of Albania as "China's first European colony." The implacable enemies of Tito were sure of a welcome in Tirana not accorded to representatives of Moscow, and full advantage of this popularity was taken by the Chinese Communists in sending to Albania in February both a delegation of the Party, headed by a member of the Politbureau, Li Hsien-nien, and another of the China-Albania Friendship Association. Great enthusiasm was shown for the distinguished guests and the portrait of Mao Tse-tung was displayed alongside that of the Albanian Communist leader Enver Hoxha. According to what seemed to be authentic reports of the discussions among the Communist parties in Moscow in the previous November, the Albanians alone among the European parties had openly taken the side of China; in Tirana the Chinese delegates praised the Albanians for the "purity" of their Marxist-Leninist faith and their struggle against not only the imperialists but also "modern revisionism as represented by the Tito clique."

Earlier an Albanian economic delegation visited China (January 11–February 2) and signed a number of agreements and protocols on Chinese aid. At the time no inkling of the amounts involved was given.

China and Latin America

The Chinese press during this period expressed great excitement and satisfaction at the progress of Fidel Castro's revolution in Cuba and its repercussions in other countries of Latin America. Cuban visitors to China included a Health delegation led by Mario Requera, which was received by the Chinese Minister of Health Li Teh-ch'uan, and a delegation of the Association of Insurgent Youth of Cuba led by Major Joel Iglesias, which was entertained by the leaders of the Chinese Communist Youth League and the All-China Youth Federation. One of the secretaries of the Communist Youth League said that the youth of China " regarded support for the people's struggle in Cuba and throughout the world as their highest duty." The Cuban revolution had set a good example for the national liberation of other Latin American peoples; it showed that United States imperialism could be defeated.

Demonstrative Chinese support was also given to the " Latin-American Conference on Sovereignty, Economic Emancipation and Peace " convened in Mexico City early in March. A Chinese delegation headed by Chou Erh-fu, a member of the China Peace Committee, was sent to attend the conference, and messages of greeting were sent to it by Chou En-lai and Kuo Mo-jo. A Chinese delegation headed by a trade union leader, Huang Min-wei, was also dispatched to convey " the fraternal greetings of the Chinese peasantry " to a Conference of Latin-American Plantation Workers held in Havana. Huang declared, following the language of the Moscow Declaration, that the United States was " the common enemy of the Chinese and Latin American peoples, the worst enemy of all the peoples of the world "; he pointed to China's achievement in land reform and the abolition of landlordism and said that " the victorious realisation of land reform in Cuba " would now inspire peasants and farm workers throughout Latin America.

Special interest was shown by the Chinese press in the political situation in Peru, and China's support for " national democratic " revolution there was formally expressed in a joint statement demanding the release of Raul Acosta, the arrested General Secretary of the Peruvian Communist Party, which was issued by the All-China Federation of Trade Unions, the All-China Youth Federation, the National Women's Federation and the Political Science and Law Association of China. The statement denounced the reactionary policies of the Peruvian government under the influence of the United States, its " unlawful " suppression of the Communist Party, and its terror against " the democratic movement of patriots and progressives." The Chinese people gave resolute support to the Peruvian people in their just struggle against reactionary rulers; they were confident that the national democratic movements of the Latin

American peoples were growing stronger with each passing day and that "the Peruvian ruling clique" would soon be defeated.

China and Africa

The murder of Lumumba was the occasion for the organisation of mass demonstrations in China. But Peking's analysis of the event differed significantly in the first instance from that of Moscow. The Soviet press singled out the Belgians, the UN force and Mr. Hammarskjoeld as the culprits; China also denounced the Belgians and the UN force but picked U.S. imperialism as the arch-criminal. The Chinese press later agreed that Hammarskjoeld was guilty too, but insisted he was merely a tool of the Americans. Mr. Khrushchev, clearly concerned not to damage his relations with the new American administration, did not fall in with this analysis. The episode indicated that despite the Moscow Statement, there had been no meeting of minds on fundamentals.

Chinese goodwill towards the new African nations was emphasised by the departure of a delegation of the Chinese-African People's Friendship Association headed by its President, Liu Chang-sheng, to visit Ghana, Guinea and Mali. Mali appeared to outdistance all other African countries in Chinese favour with the conclusion on March 4 of a Trade and Payments Agreement between China and Mali on March 4; this had been negotiated by a Chinese trade delegation to Mali headed by the Vice-Minister of Foreign Trade Lu Hsu-chang. It provided for exports of machinery and industrial goods from China to Mali, for Chinese loans to Mali, and for settlements of payments in Mali francs.

An exhibition of Chinese economic achievements in Conakry closed on February 2 after a 37-day showing during which a claimed 310,000 people visited it.

The first Ghanaian ambassador presented his credentials in Peking on March 26.

China and Burma

Chou En-lai arrived in Rangoon on January 2 for a seven-day visit at the head of a large delegation. On January 4, Chou, Ch'en Yi and other leaders of the delegation were invested with special Burmese titles, and Chou and U Nu exchanged instruments of ratification of the border treaty. China granted Burma a long-term interest-free loan of £30 million. (See "Peking and Rangoon" by Shen-yu Dai in *The China Quarterly*, No. 5, for a discussion of the events leading up to this demonstration of Sino-Burmese solidarity.)

China and Indonesia

Another visit designed to consolidate China's relations with her Asian neighbours was that of Marshal Ch'en Yi to Indonesia from March 28 to April 2. He signed a treaty of friendship and one on cultural co-operation. The *People's Daily* (April 4) cited the visit as proof that the imperialists' attempts to sow discord between the two countries over the overseas Chinese question had fallen through.

China and North Vietnam

Despite Hanoi's backing of Moscow in the Sino-Soviet dispute,[1] a North Vietnamese economic delegation obtained in Peking a long-term loan for the purchase of industrial equipment amounting to 141,750,000 roubles. The agreement was signed on January 31 and celebrated the same night at a banquet given by Chou En-lai.

Sino-Soviet economic and trade talks

"Preliminary" economic and trade talks between China and Russia started in Peking in February at a rather low level. Both sets of talks were continued later in Moscow. The trade talks resulted in the announcement on April 8 that as a result of China's serious, natural calamities in 1960, China's unpaid trade debts for that year would be paid back over five years without interest. The Soviet Union also agreed to despatch to China 500,000 tons of sugar to be paid for interest-free between 1964 and 1967. The economic talks continue.

[1] See P. J. Honey, "North Vietnam's Party Congress," *The China Quarterly*, No. 4.

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